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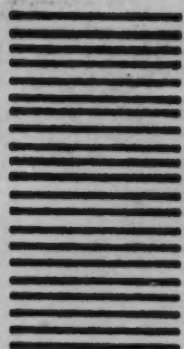
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ABSTRACT

The sixteen chapters in this publication represent summaries and combinations of weekly reports done by students in the graduate course, Curriculum Development in Vocational Education. These reports on selected topics pertaining to curriculum development in vocational education are presented in the following format: discussion of the topic with extensive reference to the literature, a reference list, and (frequently) a list of suggested readings. Topic titles include State Plans and Curriculum Planning; National Legislation and Curriculum; Role of Advisory Committees in Curriculum Planning; Discipline: A School Curricular Issue; Students with Special Needs--The Slow Learner; Teaching the Handicapped; Vocational Education for the Handicapped; Competency-Based Vocational Education and Curriculum Development; Technological Change and Curriculum Development; Facilities Planning and the Curriculum; Career Education and Curriculum Development; Cooperative Education; Comprehensive High School Curriculum and Adult Vocational Education Curriculum; The Role of the Teacher, Principal, and Administrator in Curriculum Planning; Sociological Factors in Vocational Education; and Goals of Vocational Education. (YLB)

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SUMMARIES OF REPORTS IN CURRICULUM DEVELOPMENT

Compiled by graduate students
in VTE 680 Curriculum Development
SPRING SEMESTER 1979

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INTRODUCTION

A major assignment in the graduate course, Curriculum Development in Vocational Education (VTE 680), for the 1979 Spring semester was to read and report extensively on selected topics pertaining to curriculum development in vocational education. The students selected topics of interest and submitted weekly written reports. These weekly reports were summarized and combined into chapters for this publication by each student.

The total class cooperated by submitting their final reports according to a pre-determined format and by following the Publication Manual of the American Psychological Association. However, a special acknowledgement should be given to Patricia Laino who assisted in proofreading, editing, and expediting the printing of this publication. Thanks also is due Carla Zangrilli for designing the cover.

Justice M. Cheney
Instructor

JUNE 1979

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Chapter 1

State Plans and Curriculum Planning

By Mary Caiola

Historically, programs planning in occupational education was developed as a result of local initiative and has always been the result of local planning. It was natural then, that programs would be in response to local objectives. These objectives may be represented by local manpower need requirements and the local communities' belief regarding general education pedagogy, the kinds of student which should be provided for in vocational education, and how much money could justifiably be diverted to programs in occupational education. Given such a history, it is likely that many State Agencies will find themselves in opposition to the historical practices of occupational education within their states. If the State Agency is to assume responsible leadership for program planning, it must become the initiator in the planning and decision-making process.

Prosser and Quigley (1968) believe that the most significant attempt of the Federal Government to promote public vocational education of less than college grade was the passage in 1917 of the National Vocational Education Act known as the Smith-Hughes Act. A brief history of the foundation and general provisions of the National Vocational Act brings into focus the present considerations of vocational education which are needed to democratize the education of the country. Since the purpose of the Smith-Hughes Act was to establish a system of vocational education to be operated by and for the several states, it follows that the administration of the system must necessarily be largely in the hands of the states. In order to share in the benefits of the Act, it was necessary

that each state do the following things: accept by legislative action, the provisions of the act, appoint the State Treasurer as custodian of the Federal funds allotted, and create a State Board to cooperate with the Federal Board in the administration of the act.

The need of National grants to the states for vocational education was recognized and acted upon for the purposes of helping the states to carry the cost of giving vocational education, and to help solve a problem too large to be worked out by the whole nation. Prosser and Quigley (1968) carry the study out further by stating that the State Board for Vocational Education is the only agency within the state with which the federal agency has any official contact. All matters relating to vocational education within the state are responsibilities of the State Board. This board is free to determine the types of vocational education that it expects to provide, the location of schools and classes offering training, the amount of aid to be given to each school, the subjects to be offered, the personnel of its teaching force, and the salaries to be paid. The State Board prepares plans showing the purposes for which federal funds are used. These plans are submitted to the federal agency and the act requires that if they are found to be in conformity with the provisions and purposes of this act, the same shall be approved. These plans are not expected to be uniform since the conditions and needs in the states vary greatly. When approved, the state plan becomes the agreement under which the program of vocational education is to be operated with the responsibility of its operation resting primarily on the state.

Barlow (1974) discusses vocational education planning in much the same way with the added focus on current trends. Planning which has always been

a critical responsibility of administration, received added emphasis in the vocational education administration of 1968 which declared, in effect, that educational planning is a complex operation upon which the continued success of vocational education depends. State, local, and sometimes regional plans must be updated not only to accurately reflect current operations but also to include attention to long-range goals. The weak link in the financing of vocational education is the states' financial commitment. Even with a reasonably high level of federal financing of vocational education, this level is far below what is needed. Barlow (1974) theorizes that vocational education is a socio-economic enterprise that stems from central vocational education law at the federal level and spreads through the various states to local educational areas in a vast complex of educational schemes all aimed at one central idea; people and jobs.

Judicious investments of federal funds into the public educational system can be used as a method of bringing about change in the curriculum and organization, providing that the persons administering the funds at the federal, state, and local levels accept their responsibilities for leadership as well as for money management. According to Rhodes (1970) increased funds for the support of vocational education cannot be effectively utilized without the relaxation of the existing Federal restrictions on the program. A funding pattern must be developed which will assure change in the system rather than a maintenance of the status quo.

Perhaps one of the major resources for the development of a new system of vocational education rests in the Vocational Education Amendments which in cooperation with the states and local funds can make investments in the educational system in such a manner that changes could be made

through the use of existing staff and facilities rather than a totally new organization. Lazerson and Grubb (1970) perceive the greatest advances in vocational education as coming through large Federal grants rather than through grants specifically limited to vocational subjects. If designation of funds for vocational education is continued, the legislation should define this type of service in broader terms.

Of vital concern is that of meeting the demands of the people and industry. Fleming (1974) makes a point of this when he researched that the labor force will soon be in excess of 100 million. The tasks of training, guiding, retraining, and employing people will test the ingenuity of the vocational planners. We need to examine the extent to which our occupational training is really directed to tomorrow's jobs. The basic skills we teach must involve a cluster or family of occupations rather than the traditional occupations. Current proposed legislation associated with "blank check" revenue sharing contemplates the transfer of administration from the federal government to the states, and often directly to larger cities, by-passing the states.

A change of style in funding, already started is likely to continue in the decade beginning in the mid-1970's. As vocational education adjusts to external influences, the reaction will produce an equivalent of scar tissue in the vocational education delivery system in the form of funding which contains aspects of both revenue sharing and categorical aid. Gillie (1976) further predicts that the resultant new funding approach will be more more flexible in that many of the constraints in traditional vocational education will have been shunted, but new inflexibilities inherent to the new funding mode will appear. Careful specifications of how the

funds are to be disbursed will be made. The extent to which such specificity of regulations is increased will depend on whether or not it is found that present categorical funds are being used wisely for their intended purposes. Indications are that they are falling short of intentions. If this is felt to be true, Congress and state legislators, believing that these funds must be spent only for vocational efforts, the concern will be translated into reduced funding or additional bureaucracy to enforce the intent of the funding.

Gillie (1976) believes that other federal funds will flow back to the states in the revenue-sharing mode. Criteria by which political units, called prime sponsors, can singularly or together qualify for such funds will be refined. The unique element within this approach, which is extremely threatening to many vocational education leaders throughout the nation, is that control of these funds will be vested with the political governing officials in the designated primary sponsor units (as opposed to state departments of vocational education). These leaders, with their governing and advisory boards, will have the authority to establish new structures by which the funds will be allocated and disbursed. This alternative may appear to be a most radical one to some, it is likely to take the place of the traditional vocational systems presently found in some places. If it is found to be workable in these places, it will hasten the decline of the traditional delivery system elsewhere. A movement in this direction would result in a radical change in vocational education and could have severe effects on the traditional public vocational education delivery system. Is it the bureaucratic tendencies of some legislators, who assume such changes will result in more economical vocational education? Or is it

an attempt to replace the old system with a new one because of genuine dissatisfaction with it? The latter may be the main motive behind the funding changeover.

We must all communicate a desire and capacity to serve all persons who need services, including the hard-to reach if we expect an increase in federal funding. Bottoms (1977) shares this belief that we should seek full funding of the Vocational Education Amendment of 1976 so that we can have the resources enabling vocational teachers working with the disadvantaged and handicapped students to add richness to home and community. Although needs vary from state to state, a national review suggests that secondary level vocational education should set about to decide the kinds of programs that are needed. There is a compelling need to expand the vocational program available to youth. In many communities there still remains a lack of opportunity for youth to seek and pursue preparation for a technically-skilled occupation.

Bottoms (1978) also points out that in 1976, the National system of vocational education served more than 15 million individuals in more than seven thousand institutions (offering more than 6 or more vocational courses). Consequently, the nation now has the means through which its citizens can be developed for the jobs and work that our society needs performed. This investment in professional know-how, facilities, and equipment represents a national resource worthy of being maintained and improved. Yet the local, state and federal partnership that brought about the present vocational education system into being today is in jeopardy. The federal policy if extended into the 1980's will seriously diminish the effectiveness of vocational education and the investment that has been made. Federal support for vocational education has been declining since 1974, and if the trend continues, the present system will lose its capacity

to respond, and will soon be ineffective. What was once a partnership, is rapidly becoming one-way: the federal government increases its priorities while state and local communities foot more and more of the bill. State and local leaders have supported vocational education with almost nine dollars for every ten federal dollars.

Vocational education policy making at the state level provides vocational education with a vehicle for thinking proactively rather than reactively. Goldsmith (1977) also believes that participants should recognize that vocational educational policy must be based on sound vocational education principles rather than on legislative necessity. One of the persistent deterrents to quality vocational programs has been and still is the nature of vocational education policy at the state level, or in many instances, the lack of policy altogether. If state policy is inadequate or not up-to-date, local policy is inadequate.

States need policies for vocational education that are based on sound social, philosophical, and economic principles. They need to make an issue of having sound policy - policy that can be generalized to all vocational programs, policy that is not prescriptive. States may even wish to incorporate policy related to vocational education principles in their education codes making it the policy of the people.

Problems in State Planning

A National survey of problems in state planning for vocational education is mentioned here by Morgan, Lawrence and Champion (1974). Recent federal legislation in vocational education has focused considerable attention on the State Plan. Consideration of the conduct of statewide program planning in vocational education is haphazard and fragmentary. A number of reasons for this include the lack of funds for planning, lack of data on labor market

needs, and a lack of initiation or leadership in planning from the state level.

The most feasible and tangible product of the federal mandate to vocational education is the State Plan. It is important to distinguish between the State Plan, required by federal legislation since 1917, 1963, and 1968 amendments and state planning. While state planning clearly includes the State Plan, it is easier to define the second than the first. In making interstate comparisons, it is easier to do so in terms of the State Plan because of the relatively homogenous response to rigorous federal guidelines for its construction. Evidence reveals that the document is largely engineered toward compliance and is not often used operationally. Suspicion about the quality of data available to state vocational education planners has led to further distrust of the accuracy of projections contained as justifications for program choice in State Plans. It is not clear why little research has been generated in such an important area so obviously in need of objective examination.

State Plan development takes about 5% of total available time and Morgan and Champion (1974) reveal that one quarter of this planning time is actually spent on planning. This offers a possible reason for dissatisfaction among the advisory agencies' committees. As stated previously, the most pressing problem facing directors is the uncertainty with which the availability of future fiscal resources for programs is allocated. Also perceived as problems high in both frequency and severity is the insufficiency of funds to support, long-range programs, inadequate systems for program evaluation, confusions and inadequacies in data format and content, and lack of staff and adequately trained personnel for planning at both the state and local levels.

Planning Responsibilities

The demands for the development of new programs in occupational education are going to require increasing leadership at the state level. Since any change in legislation or funding policy will likely be initiated at the State Agency level, it is obvious that the State Director be able to formulate and dictate the structure of the planning environment.

The first concept to understand, according to Woodruff (1976), in designing a system of shared educational responsibility is that there is a difference between the "planning" and "delivery" of educational services. Since the local agency bears the responsibility for the actual delivery of vocational education programs, we have traditionally accepted the idea that it is this agency which should bear the responsibility for program planning. There is little support for this contention and there is little truth to suggest that such an approach results in the most effective planning or results in the most efficient allocation of planning resources. Any function not specifically assigned to the federal government remains the right and responsibility of the state; and the biggest is the responsibility of education. And so it is the State Education Agency which is responsible for the planning and delivery of educational programs within each state.

Few states have moved from one policy to another as a result of an evaluation of their initial policies. Most policies and procedures represent the initial procedures developed in the individual states. There are many different policies relating to the planning and financing of occupational education and no movement towards unification. It is not clear why, with so many alternatives available for consideration, there has been

so little fusion among states. One of the major factors which has prevented changes from occurring within each state is the fact that the legal and political environment is rigid and not conducive to the implementation of new procedures and policies.

The Planning Process

Planning and the planning process is essentially a function of four components and Woodruff (1976) has researched the following:

1. Goals: The first problem in defining goals of the planning process is to determine who is responsible for the setting of goals to be met through the educational system. If program goals are to be set at the state level, then some steps must be taken to assure that local implementation planning is conducted on the basis of these goals. In addition to the manpower related goals for occupational education specified through Federal legislation, there are many other legitimate goals which may be established by the State Agency. It is necessary for the planners to clarify specific goods for occupational education before engaging in the process of planning educational delivery systems.

2. Constraints: The legal and economic restrictions imposed on the planning process are generally found in the fact that the State Agency for occupational education frequently does not exhibit direct control over the flow of state and federal funds used to support local programs in occupations education. The State Agency has the responsibility to provide long-term plans for the financing of vocational education and it must engage in such planning on a continuous annual basis. (5-year State Plan will be discussed later). The political nature of the planning process takes place at the local level. When planning is done on a local basis or left in the

hands of local planners alone, it is difficult for a State Agency to adequately develop a system of education which responds to statewide needs and goals.

Another major constraint to planning is the shifting to the local agency responsibilities for conducting such activities as manpower surveys and student follow-up summaries which represent a significant restraint on the State Agency's capabilities to carry out its mandated functions. This constraint runs parallel to the previously discussed problem of goal getting and the problem represented by local manpower, and funding constraints must be resolved concomitant with solutions of the problem of assigning responsibility for goal setting. A lack of mechanism is seen by which the State Agency may exert direct influence over local program funding.

3. Data: This is the information required to define goals and on which decisions may be made. The Federal Government, in specifying the data to be provided in the annual State Plans hoped to induce planning by requiring states to gather and report the basic data needed in planning for the goals which it had selected for occupational education. The local agencies frequently make their decisions based on local political inputs, rather than planning on the basis of goals desired from the data. Both the State Agency and the local agencies must make constant program decisions based on information - but not all of these decisions are based on data. Both agencies need the same information and data for different types of decisions. For example, some data on local enrollments, student needs, and local manpower requirements will be required for local education agencies' course and staff requirements. This same data will be used by the State Agency in formulating both its long-term master plan-

ning and its annual plans for the allocation of resources according to areas of need.

Where there are local agencies with a requirement to submit local planning data with their applications for funding, local administrators have complained that they do not have manpower to gather and evaluate reliable data and they do not get data in a useful form. Data alone does not make for good planning. Because the State Agency is often unable to implement plans directed toward state-level goals, it may be that it is inappropriate to conduct final program planning at the state level, although the State Agency may still be in a position to gather basic planning data and compile it in a form appropriate for use by the local agency. Given the political constraints under which local planning is conducted, it may be that data provided by the State Agency will have little impact on local planning.

It is argued that simply requiring the local agency to gather data, the local planners will be forced to learn more about their own problems than they would be likely to learn from a compilation of data prepared by the State Agency. It is probable that any planning agency which relies on the local agency for its basic planning data must also make provisions to legislate this function and support it with adequate financing.

4. Decisions: The problem of decision-making must be considered from two points of view - the technical problems of decision-making (i.e., data analysis and evaluation, etc.), and the organizational problem (i.e., the personnel and political factors which affect the process of decision-making). In most states, the local agency has autonomy in identifying programs to be offered and in planning for program delivery. There are

two reasons why this autonomy exists. First, few states have taken the leadership to identify specific goals which would set any limits on the kind of planning decisions which can be made at the local level. This, in turn, has provided the local agency with a broad latitude not only in defining its own goals, but in defining the data on which decisions will be based. Second, the only power that states really have of controlling local decisions is on withholding of program approval. This practice takes the State Agency out of the position of planning leadership and places it in a position of simply responding to local initiatives. The State Agency can tell the local agency what it cannot do but does little to promote plans made by the State Agency.

In summary, the total planning process must take account of many interactions between the requirements of goal definition, the evaluation of system constraints, the problems of identifying and gathering needed planning data, and the allocation of responsibilities for decision-making.

State Agency Control of Program Planning

In most states control over planning are represented only by the data required for program approval. Exceptions to this rule exist in California and Ohio. These states not only require that local districts support their program proposals with documentation of need, but also require comprehensive statements of how they will be operated. This requirement is especially significant when the programs are based on "contract" or "joint system" plans, in which case the local agencies must provide plans for such activities as transportation and curriculum development before it can be approved.

Two states, Michigan and New York have introduced policies by which the state, through its funding policies, can promote and control the development of vocational education in the areas and programs in which the greatest needs exist. New York State has placed the operation of its programs in a form of competitive free market to be supported entirely by local agencies and has chosen to promote program development by using its federal funds to absorb the total cost of new construction. New York, also disburses its state and federal funds in the form of project grants to local agencies for carrying out specific programs according to objectives and priorities set forth in the annual and long-range plans. These project grants require no matching funds and are based entirely on the project budget supported by the local agency.

New York State Annual Program Plan - Fiscal Year 1979

Requirements for an annual program plan as mandated by the Office of Occupational and Continuing Education (1979), include: updating of the 5-year State plan to reflect later or more accurate employment data or a different level of funding than was anticipated; description of the uses of Federal, State, and local funds proposed for the fiscal year in terms of programs, and how their uses may differ from the uses proposed in the 5-year plan, together with the reasons for such changes; description of the uses to be made of VEA funds for the various purposes of the Act, how their uses may differ from the uses proposed in the 5-year plan, and the reasons for such changes; and the proposed distribution of funds among eligible recipients. The annual plan must also show the results of: coordination between VEA and manpower training program, compliance with sex equity provisions of the Act, and participation of local Advisory councils.

The fiscal year 1979 annual plan does not include an up-date of employment data, since an examination of employment data needed for occupational education planning is being conducted by the recently formed State Occupational Information Coordinating Committee, consisting of representatives of the State Education and Labor Departments. The forecast of economic trends is for a continuation of current, steadier economic conditions in the State. The unemployment rate is expected to drop substantially from 10.3 percent in 1976 to 8.1 percent in fiscal 1979. New York State's workforce will continue to shift towards white-collar and service-worker occupations.

The mission, goal, and objective statements describe the uses which the State intends to make of the funds available to it under the Vocational Education Act, for four instructional levels, namely; Secondary, Post secondary, Adult, and Multi-level. At the secondary level, funds will be used to continue, improve and expand, and establish new instructional programs and supplementary services for the general, disadvantaged, and handicapped population. The 450,000 secondary occupational education students reported in 1978, an increase of 16,000 over the previous year, may represent a peak, since the total secondary school population has begun to decline. Even if secondary enrollments remain steady, this great volume of students requires a corresponding investment in costly new equipment, teacher salaries, supplies, and related services in order to maintain a high quality of instruction and to keep abreast of changing technological and societal needs. A total of \$11,698,381 will be used to support secondary level programs in fiscal year 1979, and increase of \$1,373,865 over the amount projected in the 5-year plan.

Uses of secondary funds, as projected in the 5-year plan, include cooperative work experience, inservice education, guidance and counseling, youth leadership development, consumer and homemaking education, and occupational preparation for the disadvantaged, handicapped and persons with limited English-speaking ability. Work will continue on the development of a competency based instructional system, designed to help teachers continuously improve their effectiveness and to bring the skills acquired by occupational students as closely into line as possible with the changing needs of employers.

At the post-secondary level, VEA supported activities for fiscal year 1979 include general program development, work experience, curriculum development, staff development, guidance, and counseling; including placement and follow-up, occupational preparation and supplementary services to meet special needs of the disadvantaged, the handicapped, and persons with limited English-speaking ability; sex equity programs, and energy education. The total allocation for post-secondary programs and services is \$4,607,076. The 2-year colleges have the primary responsibility in New York State for preparation leading to employment in the growing technical, service, and subprofessional careers which require associate degree level training for entry. Currently, approximately 83,00 full-time and 68,000 part-time students are enrolled in over 600 separate curriculums at 83 community colleges and six agricultural and technical colleges.

Emphasis will continue to be placed on articulation between secondary and post-secondary occupational programs. The new proposal review and approval process involves close working relationships between occupational education and higher education personnel in the review of all VEA proposals.

An area of critical need today is adult vocational education according to New York State's demographic and economic circumstances. The State's population ages 20-44 will increase by more than 1½ million, or 17%, between 1975 and 1985. This adult population reinforces the need for expanded training opportunities. Between 1970 and 1974, the number of families in New York State with incomes below the poverty level increased by 6.6%, while the national average was declining. New York State has recognized the priority of adult needs in allocating more than 25% of its share of Federal vocational education dollars over the past 5 years for programs serving adults. These funds have primarily been used to provide instructional, administrative, and support staff needed to make services available at times and in places most convenient and accessible to adults.

An interesting point here is that in some densely populated areas, there is the need of programs to operate on a 7-day a week, round-the-clock basis. The most complete programs offer a full range of support services, including diagnostic testing, guidance and counseling, placement and follow-up, and adult basic education. The outreach capability includes mobile units providing educational and occupational counseling in remote areas.

Coordination exists with other Federal, State, and local sources of funding. Many CETA prime sponsors utilize the vocational education systems in their respective areas as a major vehicle for individual referral or class-size training. However, the training component of CETA has thus far received minimal attention. There is need to create better linkages between CETA and vocational education aimed at long-term employment in the private sector.

Clients of vocational rehabilitation, WIN, drug abuse, mental hygiene, and other social agencies and programs are also commonly referred to adult vocational programs. In addition to these on-going programs, a portion of the allocation for adult services has been reserved for use by the State in developing short-term programs to meet immediate training and retraining needs identified by employers. These programs, tailored to the specific identified, can be set up in a little as 2 weeks notice, either within the vocational education facility or at the work site.

In fiscal year 1979, a total of \$7,306,656 in VEA funds will be used to support occupational education services for adults. The anticipated level of expenditures for programs serving adults with handicapping conditions remains at \$500,000, the same level as 1978, and slightly less than the amount projected for this purpose in the 5-year plan. Improved coordination between occupational education and vocational rehabilitation will be a State-level priority in 1979.

The Federal allocation for consumer-homemaking programs increases slightly for the amount projected in the 5-year plan. Programs serving displaced homemakers and persons seeking employment in occupations non-traditional to their sex will continue to be funded at the adult level.

At the Multilevel section describes essential leadership activities at the state-wide and regional levels designed to enhance the quality of the State's total occupational education programs at all levels. Areas of activity include evaluation, curriculum development not elsewhere described, research projects and centers, data collection, regional planning, industry/education coordination, sex equity, and State-level administration. Standards of evaluation for all components of the vocational education delivery system will be developed in fiscal year 1979, and applied to 20%

of the State's program.

The Vocational Education Act (VEA) as amended by Congress in 1976 requires that states submit to the United States Commissioner of Education a 5-year State Plan, an annual program plan and accountability report for each of the fiscal years included in the 5-year State Plan. The first 5-year plan under the amendments, submitted in July 1977, covered the years 1978-1982, and included the annual program plan for fiscal year 1978. The first accountability report under the revised Act is not due to be submitted until July, 1979. Copies of the 5-year State Plan, the Annual Programs Plan and the Accountability Reports will be available to school officials conducting occupational education programs. Copies of these documents will also be available to other interested persons in locations designated by the State Board.

The competing priorities argue for a reexamination of vocational education funding policies at the Federal level. The 1976 amendments to VEA authorize expenditure of more than \$1.3 billion nationally for fiscal year 1979. The actual appropriation in the proposed Federal budget falls more than \$600,000 short of this authorization. New York State's share of the total VEA expenditures in fiscal year 1978 was approximately \$40,000,000, less than 4% of the funds available for CETA programs. The gap between authorization and expenditures is widening, and the Federal contribution to this national priority is declining in real dollar terms, at a time when the need for increased investment in occupational education and training is critical.

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Chapter 2

National Legislation and Curriculum

By Sharon Bliss

It is the prevailing tendency of the 70's to see many pressures for curriculum change in our public schools. These pressures are a result of automation and the technological advances of industry and our society.

Historically, the national government has been involved with education and it's funding since the 19th century with the control of curriculum choice left to the teacher and the local district (Saylor & Alexander, 1974).

However, in the late 1950's under the stimulus of the Russian advance into outer space, an emphasis on curriculum revision to improve American education was placed (Saylor & Alexander, 1974). Appropriations through the National Defense Education Act of 1958 (NDEA) accelerated curriculum development especially in math and science. Although initial interest was in trained manpower in fields of national defense, an effort was also made to utilize new technology in instructional methods in order to improve our educational programs. As a result of the NDEA of 1958, more than 100 national curriculum projects were identified with some still being developed in 1973. Each project was aimed at the content of one subject area. The developed curriculum materials resulted in well designed teaching learning systems used as instructional packages.

Since 1958, the dilemma of who should control curriculum has developed. Phillips & Hawthorne (1978), suggest that federal influences reign over all facets and levels of the educational system, creating de facto control of education at the state and local levels through it's many regulations and conditions for receipt of aid. They also perceive that federal legislation exists for corrective and/or preventive programs that are in the national interest. Specifically, the federal government influences curriculum decision making by support of selected curriculum research and development efforts (Phillips & Hawthorne, 1978).

However, Frazier (1978), feels that the federal government should be left out of curriculum development and it should be left to the state. The reason being that many have become discouraged with federal regulations, paperwork and strings attached to dollars.

Other educators and the public in general seem to support Frazier's idea regarding federal control over curriculum. Many are inclined to recommend that the federal government should provide resources for education without regulations and other controlling factors. Also, they are ready to support the idea that the national government should still provide assistance for the development of special types of programs which will help meet the local needs of the community.

It has been felt that curriculum influences from

society expresses its concerns and wishes through state and federal legislation. However, this is not always true since legislation is quite often developed through the political process of compromise, which is an accommodation of differences of opinions. The resulting "mandate" held by the government is usually not a concern of the local district where the actual implementation must occur. Many of these federal mandates are not so much concerned with new content for the curriculum, as they are the process of education and the delivery system (Kiser, 1977).

Assuming there is federal interest in recognizing the needs of the states and that the states are willing to make their appropriate contribution, there is a need for defining the state/federal role in education and curriculum decision-making.

The first step in the plan should be communication between the two levels of government. They should be able to articulate program concerns and priorities between them. In the past, the federal government pressured from special interest groups, have forced implementation of curriculum on the local districts through the state government.

A suggestion for improving the federal/state partnership is for local districts and state agencies to develop priorities in curriculum in their states. With this information, the state agencies could work with the federal

level (Frazier, 1978).

Phillips & Hawthorne (1978), suggest that any organization that has a concern should influence curriculum. Also, no one specific level of government makes curriculum decisions but it is a combination of many influences. On the other hand, Singletary (1978), differentiates three separate roles being played by each level of government. The federal government playing the part of concern, while the state and local levels take the part of responsibility and function. Since the federal role with curriculum involvement is one of concern, Phillips and Hawthorne (1978), concludes that the state still holds the ultimate responsibility for education of it's youth by controlling curriculum decision making in the following ways:

1. Legislative mandates
2. In some states, statewide approval of textbooks
3. State approval of curriculum
4. State certification of teachers

The efforts of the federal government to provide a system of public education which establishes and encourages schooling and new programs to meet the needs locally have been evident for the last two decades.

Although states have complained about detailed regulations and demands, one can't forget the federal involvement in special need areas such as the handicapped, sex equity and accountability. The Vocational Education Act

of 1963 and the Vocational Education Amendments of 1968 resulted in many and diversified curriculum changes. These gains in the past decade deserve praise instead of criticism.

The drafting of the Vocation Education Amendments of 1968 certainly has influenced our curriculum (Minear, 1969). Congress increased existing funds to provide expanded programs in vocational education. It was aimed at helping programs to develop for the disadvantaged which included socio-economic or physically handicapped.

Secondly, post-secondary education was emphasized. At least 25% of funds but not less than 15% were available for further education of persons who had completed or who have left high school.

Another area was consumer and homemaking education. Appropriations for projects to assist consumers and help improve home environments and the quality of family life especially in economically depressed areas were made.

The amendments also authorized new sums to support research and training with emphasis on demonstration programs and the development of new careers. Other programs were: cooperative education, development of new curriculum materials, training and development programs for vocational education personnel.

The definition of vocational education was broadened to include remedial vocational or technical instruction relating to training programs and to include counseling

and services which would help in job placement.

This legislation changed the states' flexibility in developing new programs. It included a high percentage of federal monies to start new programs, in economically depressed areas, as long as each state met total matching dollars.

The impact of the Education Amendments of 1976 on our educational system and curriculum is evident. The planning and accountability functions of the act and the extent of involvement of all segments of the community in the educational process is clear. The five year state plan for vocational education involves linkages with agencies providing comprehensive planning. The annual accountability state reports will further show how funds have been used, whether program goals have been achieved and a summary of evaluations (Reid, 1976).

Curriculum will be changed and influenced by this legislative mandate. Educators are being forced to be accountable for their responsibilities as teachers. A teacher's ability to teach may be judged on the student's achievement level. The teaching profession will be forced to establish realistic goals to be accomplished by the student. With the increased desire to have students perform and achieve higher standards, new instructional techniques will be implemented. Educational experimentation will be used to discover improved curriculum. There will be a

shift in the normal referenced measurement testing to criterion referenced testing which will be based on student performance criteria with the hopes of raising the standards of instruction.

Curriculum revisions are coming about in an attempt to overcome sex bias and sex stereotyping in vocational education. Title II (vocational education) of the Education Amendments of 1976 provides for equal opportunities for females and males in vocational educational programs (Vetter & Peterson, 1978). The Amendments pertain directly to state and federal programs but establishes priorities and procedures that affect local educational programs.

Provisions related to overcoming this discrimination is included in three major sections dealing with vocational education programs. These are requirements for the administration of state vocational education programs; provisions governing state use of federal vocational education funds and requirements for national vocational education programs.

The provisions of Title II states that 80% of the federal funds are required to be spent on such programs as for displaced homemakers, single heads of households and homemakers who lack adequate job skills for the job market. The remaining 20% of funding may be used for support services for women such as day care for children

of students, vocational guidance and curriculum changes. The funds can be used for research grants for development of new and different curriculum materials free of sex stereotyping, development of criteria for the review of curriculum materials for sex stereotyping and review of present curriculum materials for sex stereotyping.

The implications of the Education of the Handicapped Act, (Public Law 94-142) on curriculum is many. The concept of mainstreaming students into the classroom and the community will be a reality (Nyquist, 1977). Federal provisions of this law states that handicapped students should be placed in their least restrictive learning environment. Because of these changes in the legislation, there is a good possibility that some handicapped students will be placed in vocational education classes seeking job entry skills (Hartley, 1978). Educators are concerned over the fact that very few vocational education instructors have had no special educational training in order to teach special need students.

Strategies for a pre-service program in vocational/ special education teacher preparation will be stressed.

The occupational teacher will need to assess new goals and objectives in order to design a program beneficial to the integrated class. Also special educators will need to have more training in the vocational areas in order to meet the needs of handicapped students so that

they may become partially or totally self-supporting.

The federal involvement has certainly been felt. The influence of legislative mandates has been significant.

The national government has also influenced curriculum decision making through such federal agencies as the National Institute of Education (NIE) and the U.S. Office of Education (USOE).

The role of the NIE up to 1978 was devoted mainly to curriculum development and related activities. However, starting in 1978, NIE shifted its emphasis from sponsorship of full-scale curriculum development projects to support for basic and applied research and efforts to simulate, facilitate, and to coordinate research and development work of other educational agencies.

Federal investment in curriculum reform has always been questioned. Some have viewed this involvement as contributing to a nationalization or homogenization of the nation's curricula (Schaffarzick, & Sykes, 1978). Issues concerning federal involvement in power, and decision-making were a part of the debate. Some critics felt that federal intervention was producing groups of career curriculum reformers who continue to change programs and keep the curriculum reform strong. These same critics felt this would lead to federal agencies having power over the nation's curricula. However, supporters of central control

felt that centralization of the curriculum has improved quality of education through involvement of many educators and experts in the field.

As a result of the controversies and the facts revealed, NIE decided to reappraise it's priorities in curriculum with the use of a Curriculum Development Task Force. From the findings of the Task Force in 1978, it was recommended that NIE set a new policy on curriculum involvement. The new policies recommended were:

1. An instructional program improvement with special emphasis on minorities. Primarily the development will be directed to the equalization of educational opportunity.
2. Also priorities in instructional program improvement were set: applied research and to strengthen and coordinate others' efforts.

The shifting of funds of the NIE did indicate a significant change in curriculum. Mainly, less emphasis was placed on curriculum development activities and more upon research and strengthening of others' development capabilities and efforts.

The USOE carries the responsibility for carrying out the laws and legislative mandates of Congress in order to administer Federal programs and expend about \$6.1 billion each year (Bell, 1974).

Although the U.S. Commissioner of Education's power is mainly one of persuasion he should express his views and call attention to educational problems on all levels-

federal, state and local. In 1974, Bell recommended the following in regard to state level policy, planning and priority-getting deficiencies:

1. Apply the principles of the accountability laws.
2. School districts need to reorganize and consolidate.
3. Better role definitions for the State education system.
4. State policy should response to the education of the handicapped children.
5. The large city school systems have special needs from the state regarding planning and control.
6. The Education Commission of States (ECS) has been assessing educational accomplishment, through the National Assessment of Educational Program. The states need to take more steps in assesment.
7. States need to supervise and assist school districts in controlling collective bargaining in education in order to prevent inexcusable shut downs.
8. The final and important factor is the matter of qualization in state finance formulas. The state must provide reasonable equity in financing schools.

The ECS points out that the above recommendations need implementation by the 50 states through their legislatures and the state leadership of bodies in higher education.

In conclusion, the trend of society to continue to rely on legislative action at the state and federal level to direct public schools in curriculum control is a concept of the 70's. However, there still continues a lack of clear-cut policy on education at the federal level. Opinions seem to reflect a federal role in education that strongly supports efforts of states and local school districts to provide quality educational experiences for the children.

Yes, federal involvement in curriculum is here to stay. However, the ideal partnership would be one which

would give the state the responsibility for education and curriculum (without strings and mandates) involving the federal government for financial support. It would be hoped that such a program would reflect local and state priorities and would meet the needs of the students.

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Chapter 3
Role Of Advisory Committees
In Curriculum Planning
By Richard Metzger

The frontiersmen of vocational education recognized that if vocational education programs went without advice from employers and employees, two major problems would probably occur. One, programs may be established which did not meet local manpower needs and, two, the employers and employees, not having been involved, would regard vocational education as "their" program rather than "our program" (Evans, 1971).

Advisory committees were accepted as long as there were manpower shortages. When the manpower needs were met, some employers complained about wasting taxpayers' money and proposed to curtail some programs. Officials would retaliate by not scheduling meetings and waiting for the next manpower shortage to bring them added support (Evans, 1971).

Due to a recurring manpower shortage and the studies of S. M. Burt, Congress was convinced to mandate advisory committees at the state and national level. State and national advisory committees added a new dimension to vocational education. The advisory committees could better assess manpower shortages and surpluses more accurately by persons removed from local pressures. The committees could cancel out a shortage in one community by a surplus in another (Evans, 1971).

More important, the state and national advisory committees developed a social conscience of employers and employees. The committee could lead everyone to accept all the goals of vocational education instead

of concentrating only on the goal of meeting manpower needs (Evans, 1971),

Congress established the National Advisory Committee under the Vocational Amendments of 1968 and continued under the Vocational Education Amendments of 1976. The Council is composed of 21 persons representing: labor, management, new and emerging occupational fields, guidance and counseling, National Commission for Manpower (CETA), non-profit schools, women with experience in employment and training programs, administration of state and local vocational education programs, experienced in the education and training of handicapped persons, special problems and needs of disadvantaged, post-secondary and adult education, individuals from correctional institutions and people from the general public (Handbook, 1978).

State advisory committees were established in order to be eligible for funds under the education amendments of 1976. Most of the state departments strongly stress the use of advisory committees in maintaining relevant and effective programs. Thirty-seven states have stipulated the formation of advisory committees as a condition for receiving funds for reimbursable programs (Basualdo, 1976);

The duties of the advisory committee should extend beyond giving advice, but the members have neither legislative nor administrative authority. The committee is to serve and advise; not to dictate the school (The Advisory Committee and Vocational Education, 1969). The duties include working with agencies and organizations involved with education, training and manpower development. The council members may be requested to testify before the state legislature and make recommendations for legislation. Although the council was established to advise the state board, the law does not restrict them from offering advice to

other state agencies, such as the state legislature and the governor's office. The local advisory committees work with local school boards, school systems and youth organizations. The committees are concerned with the input of their findings and recommendations on the schools and their students. The local advisory council can be used for achieving in-depth knowledge of the programs and needs of the schools with occupational programs. (Resource Book for State Advisory Council on Vocational Education, 1977),

In the organizing of an advisory committee, caution must be observed. Many times potentially good councils also flounder, sometimes the councils are biased, one sided or are not equally representative of the community (Blumenburg, 1971). Ron Ely states that to organize a successful advisory committee, it must be a community effort. A positive attitude must prevail with total support of the school, community and industry. The vocational education professionals in the school system must reach a general consensus regarding its value and that the committee can be a useful tool.

Once a supportive attitude has been cultivated, the goals and purposes must be identified and the organizational structure established in the written form of a charter. The charter will dictate the purpose, indicate membership and membership criteria and last, state the policies governing the operation of the council (Ely, 1977),

The selection of members is of prime importance to the success of vocational advisory councils. The council will be composed of nine to twelve enthusiastic members appointed by a selection committee. The advisory committee will be a balanced representation of the community, of the ethnic minority group of vocations (Ely, 1977), Problems

have developed in selecting members from minority groups. It was difficult to get anyone to serve; there was a feeling of mistrust and/or that no one will listen. To overcome this problem, the committee divided the schools' attendance areas into districts, identified the district leader and invited those to become members (Breivogel, 1977),

After the selection is made, notification is sent in a letter signed by the highest administrator in your school to each member with information about the first meeting. Basualdo feels it is better to make a personal visit and verbally invite them to serve on your committee. Find out possible days and times convenient to hold the first meeting. Then announce the he/she will be receiving a letter of invitation (Appendix A) (Ely, 1977).

Ron Ely states that appointment(s) should be made just before a scheduled meeting. A new appointee is eager to serve and will most likely lose interest if inactive for an extended period of time. Before the first meeting, each member should receive a written meeting notice with a tentative agenda (Appendix B) and a telephone call as a reminder of the time and place of the meeting. Ely feels that the first meeting should be both business and social. Let the members get to know one another. Ron Ely thinks a third party speaker at the first meeting can speak more freer and more easily to the group about their legitimate activities and also feels freer to indicate those functions that are not legitimate council concerns.

The initial meeting should adjourn precisely at the hour established by the agenda; a temporary secretary should record the events and a copy sent to each member (Ely, 1977),

The second meeting will be used to elect officers, plan for the adoption of a constitution and bylaws and set meeting dates. Each council should be responsible for planning its own activity within the confines of its constitution and bylaws. Samuel Burt has designed a checklist of activities and services from which the advisory committee may choose. Samuel Burt has broken the checklist into various areas which the advisory committee may assist. First, student recruitment, selection and placement. In this first area, the advisory committee may assist in 1) recruiting students through visits and speeches at feeder schools, youth clubs, civic clubs and other organizations; 2) screening students who are applying for admission to the program; 3) developing aptitude criteria for the selection of students; 4) arranging cooperative work experience with industry and business for students; 5) locating part-time work experiences during summer vacation for the students; 6) finding positions for program graduates; 7) providing scholarships and other financial aid for students in need and for those students who excel in the program; 8) locating schools for outstanding students who wish to continue their education and training; and 9) reporting and maintaining graduate employment and advancement records (Basualdo, 1976 cites Burt, 1968).

In the second area, program of instruction, the advisory committee may assist in 1) revising curriculum content (at least once a year); 2) arranging and rearranging course content to reach different levels of students; 3) adjusting curriculum to serve small as well as large companies in the community; 4) assessing program effectiveness; 5) surveying local industrial manpower needs; 6) obtaining support for needed changes in the shop or program; 7) selecting and breaking in

new teachers; 8) interpreting laws that affect the program; 9) collecting funds for subsidizing teachers' salaries in cases where school funds are inadequate to obtain a competent instructor; 10) obtaining needed school equipment and supplies on loan, as gifts or at special prices; 11) evaluating physical conditions, adequacy of equipment and layout of the laboratory or shop; 12) establishing and maintaining a library of visual aids, magazines and books concerning industry; 13) establishing standards of proficiency to be met by students completing the program successfully; 14) selecting production jobs and projects to be used in the training program; 15) locating and obtaining sample kits of raw materials, finished products, production processes, charts and posters, etc., for exhibit and instructional purposes in the classrooms and shops; 16) selecting books to be used in the program; 17) arranging and rearranging of equipment and machinery to better utilize floor space and to make the shop safer and more conducive to learning; 18) conducting safety checkups in the shop; 19) helping to select speakers for classes and meetings; and 20) arranging field trips to industry for students, counselors, administrators and teachers (Basualdo, 1976 cites Burt, 1968),

The third area, public relations, the committee may assist vocational education in 1) bringing programs to the community; 2) relating programs to unions, labor and employers; 3) providing news stories concerning the program to magazines published for specific industry groups; 4) attending meetings in support of vocational-technical education which may be called by local and state school officials, boards and legislative groups; 5) obtaining labor and management support for vocational education; 6) participating and bringing visitors for

career days, open houses and other school activities; 7) arranging and participating in news media releases; 8) exercising influence on policymakers at the school and community level to improve the quality of the program; 9) providing means to advertise programs in local communities; 10) presenting programs to the public through radio and television broadcastings; and 11) promoting programs within the company among coworkers and their families by posting information on bulletin boards, putting news stories in company bulletins and inserting enclosures in pay envelopes and new employee packets (Basualdo, 1976 cites Burt, 1968).

In the fourth area, teacher assistance, the committee may assist by 1) helping the instructor in new areas or areas in which the instructor does not feel competent; 2) helping the instructor in interpreting and implementing safety in the school shop; 3) interpreting laws affecting the trade; 4) arranging summer and/or part-time employment for teachers for updating job skills; 5) collecting funds and arranging substitute teachers so the instructor may attend regional and national meetings of industry and teacher organizations; 6) arranging for substitute or resource instructors from industry to assist the regular teacher; 7) helping in-service training of the teacher; 8) serving as judges in youth organization contests; 9) helping to organize youth contests; 10) helping in the preparation and reviewing of budget requests for laboratory shop, equipment and supply; and 11) helping establish teacher qualification requirements (Basualdo, 1976 cites Burt, 1968).

Studies are conducted by advisory committees to evaluate how effective the vocational programs were and how to devise new programs.

(Appendix C) J. D. Wallace devised a checklist to efficiently guide a study.

1. The purpose and objectives of the study. Why do we need this study and what do we want to achieve?
2. Scope and limitations of the study. The study must be realistic and does not encompass too broad of an area.
3. Methods and procedures. How do you plan on doing the study and yet keeping within any limitations, time, financial, etc.?
4. Review of relative literature. Filter out findings that are not pertinent.
5. Summary of findings. Condense, summarize the findings into a logical order.
6. Conclusion. Based upon the study, your expertise, concluded and/or summarize the findings.
7. Recommendations. How to correct any problems found in the study.
8. Recommendations related to the study in general. How to improve in how the study was conducted.

Using this checklist, the study is completed in an orderly manner and the checklist can be approved upon. The American Vocational Association gives us some examples of objectives of studies conducted by the advisory committee. The studies or surveys conducted are usually of the following:

1. Number of people currently employed in a given occupation and the additional members needed currently and through the next five years.

2. The occupation(s) in greatest demand.
3. The jobs within an occupation in which training is needed.
4. The number of graduates getting jobs in each occupation.
5. The need for supplemental training for people already employed.
6. New areas in which school preparatory or upgrading education and training are needed.
7. Which school programs should be expanded, discontinued or established.
8. Are the training and education requirements of the occupation, job or industry being met by the school program?

Another concern of the committee should be the establishment of practices which will keep instruction practical and functional. To insure that the programs are up to date and do not drift from reality, the advisory committee acts as a watchdog (The Advisory Committee and Vocational Education, 1969).

Jensen (1977) feels that advisory committees are the foundation of vocational education. The success of their programs is often directly related to the activities of the advisory committee. On the other hand, Downing (1977) states that people have been heard to say that they are tired of pushy advisory committees. To substantiate Downing's statement, an anonymous staff survey was completed of the staff involved with a committee. After two years of existence and active participation of the advisory committee, one hundred percent of the staff surveyed felt that the committee was helpful, the committee should be continued and was considered part of the regular department operations. Ninety percent of the staff felt all committee activities had been conducted

with appropriate discretion.

In organizing a school-community advisory committee, it is important to have the school principal involved. Blumenberg (1971) feels the school principal is a key factor for success. How he perceives and applies the community-advisory notion, his acceptance of the process as part of the product and his willingness to accept a new role have a major effect on the council.

When a principal does accept the concept and builds a successful council, attention is diverted away from him/her, towards the council. The principal is no longer used as a scapegoat, but the council and community. Success and failure can be shared by everyone (Blumenberg, 1971),

Sometimes when problems do occur in the school citizen advisory committees, Breivogel (1977) sees it fit to hire a parent involvement specialist. The "parent involvement" specialist is hired as a mediator and to conduct in-service training for administrators and parents. Breivogel says that success of the council does depend on working together, not against each other.

In summary, Frank Marlow (1969) feels that lay participation can serve as a means of improving the quality of the schools. Lay persons should play a significant role in influencing school policy and educational change, but cannot assume the role of professional educators since they lack the necessary experience and training.

Marlow (1969) states that advisory committees cannot run a collision course with the legal role and functions of school board members, administrators and teachers and still expect to be effective. A harmonious marriage between all interested parties, each knowing the

responsibilities of the others will result in educational improvement.

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APPENDIX A

SAMPLE OF LETTER OF INVITATION TO SERVE ON AN ADVISORY COMMITTEE

November 26, 1974

Mr. Julian A. Carpintero
Production Manager
Victoria Tools and Dies
5042 Liberty Avenue
Memphis, TN 93418

Dear Mr. Carpintero:

This letter is to formalize our conversation regarding the formation of a Tool and Die Design Advisory Committee at Whitestone Area Vocational-Technical School. As I mentioned, we are planning to initiate a vocational-technical program in the field of Tool and Die Design. In doing so, it will be necessary for us to have assistance from your industry in formulating the plans for this program.

Since you have extensive experience in this field, we would like to invite you to serve on the Tool and Die Design Advisory Committee presently being formed.

We are planning to have four formal meetings during the year. The first meeting will be held on January 10, 1975 at 4:00 PM in the Whitestone Area Vocational-Technical School faculty lounge. The remaining meetings will be scheduled at the appropriate time.

An Advisory Committee Handbook will be mailed to you under separate cover. If you have any particular questions regarding the Handbook or any other matter, please do not hesitate to call me.

Sincerely,

Richard L. Viking
Superintendent

RLV:sw

APPENDIX B

SAMPLE OF AGENDA

Whitestone Area Vocational-Technical School
Whitestone, TN

AGENDA

Tool and Die Design Advisory Committee Meeting

Thursday, January 10, 1975

Faculty Lounge

4:00 PM Meeting called to order . . . Chairperson

1. Introduction of all members . . . Chairperson
2. Welcome and brief review of the total schools vocational-technical programs . . . Richard L. Viking
3. The relationship of this committee to the program . . . R. L. Viking
4. Organization of the committee (first meeting of the year) . . . Chairperson
 - a. Selection of chairperson and secretary
 - b. Selection of dates and time for meetings
 - c. Adoption of rules listed in the advisory committee handbook to govern the conduct of the meetings
5. Reading of minutes of last meeting . . . secretary
6. Reading of communications . . . secretary
7. Reports of subcommittees
8. Specific topics for discussion
 - a. Developing standards for the selection of students
 - b. Arranging a cooperative work-study program
 - c. Arranging scholarships for students
9. Adjournment
10. Tour of the school or instructional program under discussion
11. Tour of the school or instructional program in which the advisory committee's recommendations were implemented.

APPENDIX C

A STUDY CONDUCTED BY THE ADVISORY COMMITTEE

The purpose of this study is to gather information regarding the effectiveness and current status of Indian vocational education and to receive comments regarding the provisions of the Education Amendments of 1976, pertaining to Indian vocational education. The intent of this report is to analyze the information and develop recommendations for rules and regulations and/or amending legislation.

The study was done by sponsoring four regional hearings in each section of the country.

Mountain Plains Area
November 22, 1976; Rapid City, South Dakota

West/Southwest/Midwest
December 15, 1976; Albuquerque, New Mexico

Northwest and Alaska
December 16, 1976; Seattle, Washington

South and East
January 12, 1977; Washington, D. C.

Invitations were sent to a list of individuals, agencies and organizations who had been identified by the National Indian Organization. Notice of hearings was published in the Federal Register, the Education Daily and were sent to the local media, AP and UPI wire services.

When the hearings opened members of the task force, witnesses and observers were introduced. Each witness was allowed approximately twenty minutes for oral testimony, followed by questions from the task force. The task force also requested a written statement from each witness and accepted any supporting documentation. After all invited witnesses were provided an opportunity to present testimony, the task

force accepted statements from anyone present who wished to comment.

The findings recommended that the legislation be amended to require the Bureau of Indian Affairs to match vocational education funds appropriated through the U. S. Office of Education. Responsibilities are to be shared in administering and monitoring these funds and technical assistance to be provided for tribes desiring to submit for these funds. Criteria for evaluating these proposals should be developed to consider the special needs of the diverse population to be served. And last, no attempt should be made to establish "National Indian Priorities," each tribe must determine their own education priorities.

DISCIPLINE: A SCHOOL CURRICULAR ISSUE

By Dean Burt

Discipline is the current, number one problem in schools, in every class and subject area, hence the thrust of this paper will be along those lines and remedies thereto.

Discipline

The teacher cannot solve all the problems for all of the students all of the time. It is sometimes impossible to correct home conditions often known to create the problems in the first place, but to make the classroom experience as pleasant and enhancing to the child's self-concept as possible, may be the only impact the teacher can achieve.

Marshall (1972) suggests the following eleven techniques to employ in managing surface behavior.

1. Planned ignoring of minor infraction, non-escalating.
2. Signal interference, eye contact, silent caution
3. Proximity control - move and touch
4. Recognizing underlying feelings - allow to verbalize for anger to vent.
5. Increasing awareness - question what did, have verbalize.
6. Removal of seductive items - other distractions.

7. Prestructuring the program - allow outside learning to preempt present, if better.
8. Tension decontamination through humor - take sting out of student.
9. Antiseptic bouncing - send on errands, non-punitive note.
10. Physical restraint - hold to prevent harm until cools off.
11. Exclusion - placement plan - describes limits by advance preparation - cooperation from others, exclusion, bounced to another spot while class is instructed behaviorily - follow-up conference.

The author continues, discipline is the habit of teaching, through measures of restraint, orientation, and organization. These essentials are necessary if learning is to prevail. The object of discipline is to foster self-discipline. The values to a democratic citizenry are to inculcate respect for authority, cooperative effort, awareness of organization, respect for the dignity of the individual, and the need for doing the distasteful.

A severe reprimand, isolation, the silent approach, dismissal, and the scare tactics would be useful tools in maintaining discipline but finding out the cause of misbehavior and remedying them seem to be noted as more effective, Marshall believes.

Detention is of little value according to some educators. After school tasks likewise, and it takes the teachers time in both cases. Temporary loss of privileges, subtle punishment, mandatory restitution, corporal punishment, and expulsion remain in the arsenal of suppressive actions. However, good teaching and flexibility, developing routine with occasional changes, taking remedial actions early on, applying pressure to learn, using activity and motion as an aid, building morale and saying what you mean and meaning what you say are better tools. In conclusion LeGrand (1969) states that building rapport, relating to students and having a written code of behavior are the best techniques.

Four phases of positive classroom discipline as outlined by Clarizio (1976) are:

1. Choosing the behavior to be changed in a specific and precise way; state the objective in a way that it refers to observable behavior that can be counted. State the standard for acceptable behavior. Specify the context under which the behavior will be. Record the rate, frequency and duration of the behavior.
2. Doing the ABC's. Antecedents, the Behavior itself, Consequences attached to it. This pinpoints triggering mechanism. A's curriculum, social context, rules, prerequisite skills, cues; Behavior, whatever; Consequences, positive reinforcement, punishment, extinction.

3. Selecting strategies; targeting behaviors by identification, plotting the ABC's, select techniques; behavior formation and behavior elimination. Positive reinforcement and social modeling procedures are to be employed. To weaken undesirable behavior, include extinction, punishment, and desensitization.
4. Keeping track of results; graph, chart, etc. to enable child to observe progress, giving tangible rewards. Use reinforcement menus of not less than three nor more than ten, starting small and increasing slowly. Rules must be definable, reasonable, and enforceable. Rules must be understood in order to be enforced, especially if student has skill deficiencies or motivational problems.

Negotiated controls on self-management and education, rather than imposed, are effective for enhancing academic and personal adjustment of students.

The role of modeling as suggested previously, when a teacher acts as a live model for behavior, also influential peers and/or group leaders, can lead to the learning of new behaviors, the strengthening or weakening of old behaviors subjected to punishment and prompting of socially acceptable actions already ingrained in the observer.

Extinction procedures, also referred to by the author in his above list, is discontinue doing something

that does not work. Ignoring works only when the reward is attention. Extinction is the behavior modification technique designed to weaken undesirable behavior by discontinuing the rewarding consequences. Combine extinction and positive reward. Where "ignorance is bliss 'tis folly to be wise." Ignore misbehavior where feasible. Combine punishment and reward. Other means of extinction procedures that could be used would be time-out, response cost is a means of putting a monetary value on certain infractions and levying fines for them; or, awarding a point system for meritorious behavior and transferring that to monetary value or other reward; over-correction by repetition of corrective procedures.

Another issue facing school administrators today is accountability.

Accountability

Accountability pressures on community colleges have led to certain amounts of experimentation with performance goals, states O'Grady (1973). Public interest in educational output, the author believes, may keep performance goals from becoming just another fad.

Junior College oriented; the implications for the vocational education people who will be, and are feeders for the junior college are obvious. Everywhere accountability rears up, but in vocational education this has been the pattern for a decade.

Proposition 13 has been brewing for seven or eight years and has now surfaced with accompanying panic in many circles. The concomitant ripples in education circles require mirror looks as to what is being done.

Too long have educational institutions been satisfied with grabbing tuition monies from the fledgling neophytes into the academic world seeking guidance and training only to be handed a better grade parchment with fancier scroll, and that is all! Overlap, duplication, and weak pap are poor substitutes for the sustaining meat necessary for the long journey into the laboratory of the everyday world. Up with scrutinized production!

Elias and Reese state as an example, it is not that Distributive Education (D.E.), a part of vocational education, has been reluctant to evaluate but for purposes of accountability, they have expanded their energies in the wrong direction. Such factors as class size, student-teacher ratio, use of instructional materials, etc., which traditionally have denoted a quality program will not satisfy the systems analyst who looks at outcomes as the measure of program effectiveness. The authors believe that distributive education, because of their close relationship with employers, have better opportunities than most to keep track of their graduates and produce the evidence needed to support their programs. However, they point out that accountability means responsibility for dropouts as well as the graduates,

and even for those denied admission. Excessively high entrance standards are not a substitute for accountability, they maintain(1973,40-43.).

These criteria could be applied to all Vocational Education courses. We do not measure the dropout rate at any point in any educational endeavor, except as a statistic, which may be the base of the iceberg in accountability.

Another major task is development of the curriculum itself. The Mid-America Vocational Curriculum Consortium suggest the two curriculums shown below; the first one shown is a common format, the second is developed for a specific vocational area.

Curriculum Development

The instructor is the first and foremost ingredient in the successful application of any curriculum, and enables the accomplishment of the avowed intention of vocational education to help individuals be prepared for meaningful employment.

A. Common format

1. Measurable unit and specific objectives
2. Teachers activity sheet and references
3. Information related to objectives
4. Transparency masters, if needed
5. Assignments for practice of cognitive common knowledges.
6. Job sheets for performance of psycho-motor domain skills.

7. Unit test, related to objectives.
8. Answers to test. (NNCCVTE, 1977).

B. Specific format

1. Unit objectives - skills to be achieved.
2. Specific objectives - terminal objectives.
3. Teacher and student activities - lesson plans
supplementary bibliography for reference.
4. AV supplements - information sheets.
5. Job sheets - outline of correct procedures
with tool identification for tasks involved.
6. Assignment sheets - practice or exercise.
7. Test and evaluation - written and performance
to measure student achievement.
8. Instructors aids - test answers for teachers.

(NNCCVTE, 1978).

The components listed in the two suggested curricula are applicable for use with any occupations or trades and could also assist in the development of a smooth program.

Establishment of such a curriculum is well and good, but also an evaluation of its effectiveness in classrooms needs to follow.

Evaluation of Test Performance and Goals

The basic principle of performance testing, the procedures and conditions, and the establishment of criteria, the role of examiner and his training, the scoring and its purpose, are more thoroughly covered in a dissertation by the assistant director for research, Center for Vocational and Technical Education Ohio State University as stated in (Morrison, 1973).

He states that realism of test and of test conditions which qualified the procedure as a performance test are:

a) measuring performance, b) setting success criteria, c) clarifying the test task, d) identical measurement for all; e) observations and recording, f) simple objective scoring.

This testing procedure is applicable for use in classroom, or could be used as criteria for use by administrative or supervisory staff in evaluating and/or observing the teaching staff.

Establish the conditions, Huffman (1973), believes, and the performance goal practically writes itself. The performance goal here illustrated is one that cuts across nearly all vocational subject areas; the ability to adjust to changes in equipment and machines:

- A. Given: people, objects, information.
- B. Sources: locations, records, activities.
- C. Purpose: to do something.
- D. Methods: following, developing or refining a sequence.
- E. Outputs: documents, interreaction, intangibles.
- F. Quality: measure or error tolerance.
- G. Time limit or error tolerance.
- H. Prerequisite: ability to learn task.

These steps, if followed in curriculum development could result in correct goals and productive programs.

Curriculum Publications

Many low cost items have been urged upon

vocational education instructors. These are available at low cost and most educators are encouraged to make use of them.

There have been, however, no large scale curriculum development projects to prepare a course of study, select and/or develop instructional aids, prepare examinations, and train teachers to use these revised curricula in any field of vocational education. Unlike other teachers, the vocational educator rarely has, even today, a choice of more than one or two suitable texts, and in many occupational fields there are none (Evans and Herr, 1978).

The development of sound curricula to meet the needs of the occupational fields by vocational education will be an extremely time-consuming and expensive task. It is unlikely that a competent job can be done for less than five million dollars per occupational cluster (Evans et al, 1978, 321,322).

Publications available for supplemental instruction in the eight main courses indicate about ninety-two subject offerings so a vocational administrator and teacher has a wealth of material to aid them in curriculum development. The National Network for Curriculum Coordination to Vocational-Technical Education (NNCCVTE) and the Northeast Network enable, on a two week loan basis, more research data. The Instructional Support System for Occupational Education (ISSOE) offer from its thirteen regions

over twenty selected occupational programs to implement competency based student-centered instruction.

The Vocational Technical Consortium of States (V-TECS) supply the basics for curriculum development. Fifteen of these catalogues are available, plus others from former years. (Hay, 1979).

The Education Resource Information Center (ERIC) makes available out-of-print curriculum materials from New York State and thousands of microfiched materials from other states as well.

Publications available for school personnel use only may be ordered from The Publishers Distribution Unit, State Education Department, Albany, N.Y.

Agricultural Education	2	publications
Business Education	38	"
Distributive Education	8	"
Health Occupation Education	4	"
Home Economics Education	12	"
Industrial Arts Education	2	"
Trade & Technical Education	22	"
General Occ. Publications	4	"

In any one of these areas there is enough material to develop a curriculum suitable for the needs of your area. (Hay 1979).

If the administrative leaders of the public and vocational schools of this nation can visualize the crucial place of these schools, and if they can bring adequate understanding and skill to their task, these

schools can contribute significantly to the development of the capacity of the people to do critical thinking. These people will function through numerous community agencies and thus the program of these agencies will reinforce and compliment the efforts of the schools. To the educational administrator comes the privilege of participating significantly in this whole endeavor (Campbell, 1958).

Doing that which must be done, when it ought to be done, whether one likes it or not; is the crux of the whole matter and is the heart of discipline without which there is no progress in any endeavor, leastwise in vocational education which combines skills of hand and mind.

This chapter has covered briefly only a few of the important issues and some suggestions offered from various sources to assist educators and administrators in their tasks of development of vocational school curriculums which meet the needs of today and be able to turn out intelligent and knowlegable students in many fields. Society respects a well disciplined person, one who is capable of making his own decisions and standing on his own two feet and facing the problem of the job in a dignified manner. Educators must set the example for the students.

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Chapter 5

Students With Special Needs

The Slow Learner

By Wesley R. Brown

Educational researchers state that 20% of the students in this country are slow learners. Slow learners are children who learn at a less rapid rate than the average, but not as slowly as the educable mentally retarded. It is suggested that while educators take a closer look at the situation, it should be understood that, not all slow learners possess the same characteristics, but it is important to consider everything that is mentioned, while planning an instructional program for these individuals. While involved in a study of the slow learner (Karnes, 1976) found that in addition to a slow rate of learning these children tend to have more physical defects than the average child. Defects of sight, hearing and speech may interfere with a child's learning. The slow learner is consistently below grade level in academic progress and usually lags further and further behind their more able peers. The slow learner's reasoning ability is poorer than that of the normal child, they are slow to see cause and effect relationships, to make inferences, to draw logical and valid conclusions, to transfer learning and to generalize. A short attention span typifies this group of children coupled with poor retention which is still another weakness, leading to them having difficulty in following directions.

These students are noticeably below par in immediate and delayed memory. In addition, poor work habits and a poor motivation to learn characterizes these pupils who find it difficult to persist independently until a task is completed.

Slow learner's respond to immediate goals rather than to delayed ones. When they see no immediate, tangible need for learning facts, they are not likely to apply themselves. In 1976, Karnes said, that these individuals have poorly developed language and communication skills and tend to be less mature than average. Their poor personal adjustment leads to discipline problems, and they have difficulty in controlling their emotions and of perceiving how their actions affect others. These children feel less confident and less adequate than average which is characterized by a large percentage coming from disadvantaged homes. They are also not as curious and creative as their more able peers which is evidenced by their hesitancy to ask questions. Urban & Tsuji (1974) found the following situation which these individuals find themselves in:

The "slow learners" are not qualified to enter special programs such as those for the mentally retarded, physically handicapped or the emotionally disturbed. They do not perform well however, in classes geared to the average or above average youth. They are usually left out of any special program and inserted into the regular classroom for lack of a better place to put them. In the normal academic curriculum they fail to meet the standards of learning and either

drop out or fail. (130).

While planning curriculum a person must also identify the needs that set these learners aside from others.

While involved in the same study (karnes, 1976) found that one of the most important needs of the slow learner is a close relationship with the teacher, which involves much teacher guidance in order to see meaningful associations. They need meaningful educational experiences geared to their stage of development, and ample opportunity to develop reasoning skills. When materials are interesting and when success is possible, the attention span of the slow learner tends to be adequate. They need more and more repetition in order to reinforce learning. With these students over-learning is especially important. Slow learners do not learn incidently, if they are not specifically taught, they are not likely to learn by themselves. Recognition for completion of tasks is important to encourage future efforts. These children must see a reason here and now for engaging in a task. A reward or gratification postponed for a week or a month is meaningless. They need opportunities to practice language, by talking about meaningful first hand experiences involving what he/she has seen, what they have heard, what they have done, and what he/she plans to do. They need a stimulating school environment where they have many things to talk about. The greater a person's facility in the use of words, the more effective their thinking will become.

They especially need more vocational guidance and equally important, they need teachers who accept them and who provide a warm friendly atmosphere where they can feel secure and have a sense of belonging. They need more praise and encouragement than their brighter peers. Slow learners should be encouraged to develop their creative abilities, especially in language and thinking. They need to be encouraged to ask questions and to think through various ways of solving problems. The aforementioned group of characteristics and needs is very informative for the instructional planner, but in order to further devise a means of relating to these individuals, a person needs more information. The Dictionary of Education describes motivation as;

The practical art of applying incentives and arousing interest for the purpose of causing a pupil to perform in a desired way; usually designates the act of choosing study materials of such a sort and presenting them in such a way that they appeal to the pupils interests and cause him/her to attack the work at hand willingly and to complete it with enthusiasm. . . .). Also designates the offering of rewards or an appeal to the desire to excel. (p. 43).

Humphrey & Sullivan, (1973) found that in general, the child is motivated when he/she discovers what seems to him/her to be a suitable reason for engaging in a certain activity. The most valid reason, of course, is that the student sees a purpose for the activity and derives enjoyment from it.

The child must feel what he/she is doing is important and purposeful. Motivation is defined in three aspects;

(a) Motivation in relation to interest.

Lee & Lee, (1958) state that;

" Interest is a state of being, a way a child reacts to a certain situation . . . consistently over an extended period of time. " (p. 44).

This means that people accept as most valuable, those things that are of greatest interest to them.

(b) Motivation in relation to knowledge of results.

Bilodeau & Bilodeau, (1961) found that;

" Knowledge of results i.e. feedback is the strongest most important variable controlling performance and learning, and further studies have repeatedly shown that there is no improvement without feedback, progressive improvement with it, and deterioration after its withdrawal. " (p. 45).

There is objective evidence that indicates that learning is usually more effective when one receives some immediate information on how they are progressing. In 1974, Humphrey & Sullivan stated, that it is rather obvious that knowledge of results is an important adjunct to learning because one would have little idea of which of his/her responses were correct otherwise. In 1974, Humphrey & Sullivan expressed their viewpoint regarding;

(c) Motivation in relation to competition.

The reconciliation of children's competitive needs and cooperative needs is not an easy matter, it is an ambivalent condition, which if not carefully handled, could place a child in a state of conflict. It is possible to have both cooperation and competition in effect at the same time, as in the case of games. While one team is competing against the other, there is cooperation within each group. Other important facts one should know about competition are that, some children are violently competitive, while others are mildly competitive, and still others are not competitive at all. Boys tend to be more competitive than girls.

Smith, Cohen, & Pearl (1970) found, that slow learners are eager to learn, and only cease to grow when informed that they are intellectually incompetent, not useful to the classroom and intruders into the educational process. Many teachers willingly and witlessly deliver such messages daily because that is what they have been prepared to do. Much worse are the instances of teachers who reinforce racism. In some cases they are blatant and overt racists, but more frequently they are guilty of omission and insensitivity. Teachers tend to confuse race, class and ethnic bias with academic standards. Smith et al. (1970) also claim. If the disadvantaged are to enjoy the options in the world of work they must be kept academically alive. They cannot be shunted aside into low ability groups and not allowed to develop basic skills required further up the educational line. They cannot be isolated by putting them in special classes for the socially

and emotionally disturbed. They must not only be kept alive, they must also be given the knowledge and the experience requisite to intelligent choice. Berger & Karlin (1969) said that, the teacher structures a classroom situation wherein the student's do not encounter the same chaos and disorder which many of them experience in their homes. In addition to acting professionally at all times, the teacher must have the ability to differentiate between the slow learner and a possessor of physical defects that lead to learning difficulties i.e. sight, hearing. In working to build a success pattern in each pupil, the teacher must remember that each child is a part of the entire class, therefore, the instructor should look for techniques which hold all the childrens interest, never forgetting the slow learner. The teacher must remember to teach on the students level.

It is understood among instructional planners that the disadvantaged are the most difficult to educate and train. Another known fact is that these students need occupational preparation most, and are the least prepared to take advantage of it. (Ressler, 1974) found that nowhere in the school setting can opportunities to meet with success be more easily provided than in the Industrial Art or Vocational Education shop. Many times the disadvantaged do not believe that they can succeed. These students must see an immediate application for what has been taught. In the shop he/she can do so continuously. The one-to-one relationship in individualized instruction has long been an asset of industrial arts.

It is even more valuable for the disadvantaged than for the average student, because the opportunity to develop a positive inter-personal relationship is ever present. In 1970, Ressler continued by saying that the informal atmosphere of the Industrial Arts shop permit the disadvantaged the opportunity to compete on a more equal footing with other students without the pressure associated with the classroom. Mangum (1971) found;

The fusion of General and Vocational education does not automatically create instructional content which is more palatable to the student. It is when the student perceives the information as meaningful in helping him/her to achieve sought after goals that instructional content becomes attractive. Molding an academic package around a core of practical skills capped with work experience provided by cooperative employers seems to offer the ultimate in relevance, particularly for those from deprived backgrounds with limited verbal skills and short time horizons. There is no longer room for any dichotomy between intellectual competence and manipulative skills and, hence between academic and vocational education. (PP. 32,33).

When discussing the disadvantaged one must include the background of the individual in order to gain a deeper understanding.

Smith, Cohen, & Pearl (1970) state that there is no more intolerable condition imposed on a human being than to

render him useless. Yet one of the devastating conditions of modern man, uselessness, is the overwhelming plight of the disadvantaged. Disadvantaged youth are denied choice in careers. They possess neither the credentials nor the sponsor to escape poverty, and thus they are relegated to the intolerable choice of a poor job, or no job at all. If you are disadvantaged you are denied inter and intra-personal competence. No organism can attain a sense of personal competence if continually confronted with insoluble problems. The only response possible for the individual in such a situation is to become either apathetic or aggressive. The disadvantaged are restricted in their range of social intercourse by segregation and labeled as socially or emotionally disturbed if they protest against the inequity of the situation. Smith et al. (1970) say that it is more profitable, certainly for pedagogical purposes to look at the social and economic factors which cause problems for children in relation to school. One of the central conditions which affects many disadvantaged school children is simply lack of money. The cost of schooling, dues, trips, out-of-pocket expense, collections for various causes, places undue hardship on the child whose family is poor. If the cost is expensive, the poor child must either avoid the cost and not participate in the schools program or accept the charity of the school. Either route is unacceptable. If the child does not participate, his/her educational experience is limited, and his/her self esteem may be damaged.

If they accept the charity of the school, the injury to his/her self-concept is apt to be even greater. The disadvantaged child is often adversely affected by the instability of their family and the unemployment of their parents. It is very difficult in school for a child who comes from a home that is broken, but has economic security. But it is almost devastating for one who comes from a home where there is neither family nor economic stability. Legal services for these people are almost non-existent. The record of Police discrimination is one of the salient features of a famous report. Medical services are often unavailable to the poor causing some groups to forfeit as much as a quarter of a century of their lives. The Medical profession places profit above service where the disadvantaged are concerned. Some of these children came from families which are chronically poor. Many would perish without some form of public aid. At this level of cultural existence, the children see little in the future except the kind of life their parents have had. The schools appear to offer them neither hope nor learning. Segregation has created in many Black children a sense of inferiority, a negative self-image, and a feeling that blackness is a stigma. A retarded environment fosters poorer brain development and therefore decreased intelligence. Smith et al. (1970) finalized his statement saying that when one takes all the facts into account, the failure of deprived children to respond to traditional programs of schooling is understandable.

Also some of these children's serious environmental deficits make adjusting to work of the school impossible. A teacher who knows and understands the plight of the disadvantaged is placed in a very special situation.

Welker (1978) found the following;

Many teachers have . . . the skill and dedication required to over-come the hurdles their students so frequently place before them. The students do not select these hurdles; they are products of the circumstances in which the students find themselves. They are hurdles for both the teacher and student. The student will surmount them only if the teacher leads the way. (p. 56).

Smith, Cohen & Pearl (1970) say that an example of the above is the teacher who knows that the use of a dialect is in itself no indication of shallowness of thought or feeling, may be able to relate to the child by showing an understanding of the depth and vigor of that dialect. To extend a child's language habits is to expand the child's possibilities of human associations. The special circumstances from which these children come cannot, indeed, be ignored in the preparation of teachers. Special teachers for the disadvantaged are not needed. Rather teachers are needed who are able to work effectively with children regardless of race or social situation, but mindful of what that is in each case. Teachers should be prepared to work with the cultural and racial background of each child.

The teacher must also face the question of racial prejudice in him/herself. The Black teacher and the White teacher harbors many prejudices of which he/she is aware or unaware. The Black teacher may carry feelings of resentment and aggression that come with a feeling of imposed inferiority. Proper education of teachers will shock them into the realization of their own prejudices, and show them techniques to deal with them. Because of remoteness from the life of the disadvantaged, the teacher is likely to make the student feel unwelcome in the school, and then convince him/herself that this is evidence the student doesn't want to learn. Because they have been misinformed, the teachers are likely to confuse unintelligibility of curriculum with lack of intelligence of students. The disadvantaged, who are the environmentally deprived are too frequently and tragically confused with that child who is mentally retarded as a consequence of organic factors. Smith et al. (1970) continue by saying that the teaching of poor children does not require unique skill as does teaching the blind. For the handicap of the poor is placed upon them by the situations in which they live and the schools to which they go. But it does require broad life experiences, which few middle class teachers have had. Teachers know almost nothing about the background of disadvantaged students, and the communities where they live. All but a few have had little or no experience with other than middle class life until they walk into the schools.

In this situation, they undergo cultural shock, an experience that disorients teachers because, they are uprooted from their familiar surroundings. Teachers are frightened and frustrated when they are confronted by behavior they have never witnessed, and for which they are now responsible. Teachers fail because they have not been prepared.

The accountability of teacher preparation which includes student educational outcome is the sole responsibility of the Educational System itself. Smith, Cohen & Pearl (1970) found that, the schools are failing to educate the disadvantaged child because, society does not face up to the dilemmas of poverty. The environment of the child of poverty is the cause of pseudo mental retardation which is apparent retardation, but really environmental deprivation. Instead of placing the blame on the child, the emphasis should be placed on the educational system which fails to educate the child. The sources of educational problems of disadvantaged pupils lie in processes which occur during the time they are in school, rather than in processes prior to their entry into school. The educational system has not made any meaningful change in curriculum, administrative structure, general organization and teacher recruitment, preparation and appointment for at least three decades. Smith et al. (1970) continue. It is an ironic and tragic inversion of the purpose of education that Black and White disadvantaged school children tend to lose ground in IQ as they proceed through the schools and fall further and further behind their standard grade level in academic performance.

The schools are presently damaging the children they exist to help. The fact that the achievement deficit of these children is cumulative and increases over time seems to reflect some basic weakness in both curriculum and school practices for these children. Whatever may be the combination of non-school factors which put minority children at a disadvantage in verbal and non-verbal skills when they enter the first grade, the fact is, the schools have not overcome it.

If there is an economic structure for the poor, then it will have to come under economic deprivation. The impoverished White Child in this situation, has his/her own particular burdens to bear. As (Hurley, 1969) says

The heritage of slavery, racism--a reiterated, visible virulent aspect of American life along with the concomitant economic deprivation, have produced misery for the Black person on such a scale and in such depth that it is impossible for a White person to comprehend it fully. The pathological impact on a human being of racial prejudice alone, ignoring the added evil of poverty, is impossible to estimate. (p. 21).

In 1970, Hurley said that; If the poor Black has suffered from the stigma of race, the poor White has suffered from the stigma of not having succeeded in a society which places few racial barriers before him/her. A White Person's failure in an America which preaches "upward mobility" is of itself a unique indictment of inferiority.

To what else can a White person's poverty be ascribed?

Lewis (1969) found the following:

The individual who grows up . . . in the impoverished White culture has a strong feeling of fatalism, helplessness, dependence and inferiority. Other traits include, a high incidence of weak ego structure, orality and confusion of sexual identification, all reflecting maternal deprivation; a strong present time orientation with relatively little disposition to defer gratification and plan for the future, and a high tolerance for psychological pathology of all kinds. (p. 78.).

Another group of youngsters who face difficulties with the school system and in the classroom, is the Puerto Rican individual. Sawrey & Telford (1970) found;

The disadvantage of the Puerto Ricans is more a result of their having cultural traits that handicap them in American society, than it is of enforced segregation, prejudice, and discrimination. (p. 50).

Perez (1973) said that, "If you speak English and adapt to the cultural values of America you are rewarded. If you speak Spanish and stick to the old traditional ways, you are punished. In the school system here, if you don't quickly begin to speak English and shed your Puerto Rican values you're put back in grade . . . you're treated as if you are backward or retarded. (p. 317).

Mapp (1974) states:

Puerto Rican students ask themselves when confronted with the unrealistic attitudes of education towards them.

" What should I believe? " Their counselor usually answers the question by saying, believe that you are not intelligent enough for college and try making a living. Education for the Puerto Rican is not seen as a means to a richer, fuller life. This idea is reinforced by the counselors again who encourage the students to side-track themselves into non-college preparation. (pp. 24, 25).

In 1973, Perez found that the IQ tests only serve to reveal the cultural differences possessed by these individuals. It doesn't relate to them and therefore they don't do well on the tests. If you don't do well on the tests, right from the beginning it is entered on your record that you are a slow student. To aggravate this situation, the teachers who are assigned to teach these students have been told that the students are slow learners and therefore there is not much work to do, because the students' cannot learn much anyway. The results of this treatment is boredom on the part of the student and eventual dropping out. Smith, Cohen & Pearl offer;

The world we live in is overwhelmingly non-white. By the year 2,000, five billion of the six billion people who live on the earth will be Non-White. . . .).

These awesome facts mean that . . . this society must learn to find an accomodation with the Non-White world different from that attempted in the past. (p. 2).

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Chapter 6

TEACHING THE HANDICAPPED

By Anthony Ricci Jr.

The federal role in education for the handicapped twenty years ago, as stated by Parker (1974) was extremely limited. This has changed to where the goal of the federal government will not be attained until all handicapped children receive an education to help them develop their individual abilities to the fullest.

According to Parker (1974) most states mandate education for handicapped children. This includes a wide range of services including vocational education. The beginnings came with the Vocational Education Act of 1963. It provided vocational education "for persons who had academic, socio-economic, or other handicaps that prevented them from succeeding in the regular programs of vocational education." However, only a few states responded to the opportunities offered by this law. Thus the Vocational Education Amendments of 1968 were written, with a view of emphasizing the importance of making high quality vocational education accessible to the handicapped. Implicit in the Act, was a shift in priorities to the "needs of the student" and not the pre-determined structure of a certain course or program. Furthermore, the Amendments re-directed the emphasis in vocational education by earmarking money. Programs for the handicapped were identified as one of the categories for which the state had to set aside a certain percent-

age of federal monies spent. By 1972, it was reported that all states had designated at least one person on the state staff to assume major responsibility for planning, supervising and monitoring vocational programs for the handicapped. All states had initiated programs identifying the handicapped population as well as their needs, resources, and techniques for meeting those needs. Still this was not enough, more had to be done.

From 1973 to the present, a renewed national interest in expanding and improving vocational education opportunities for the handicapped was/is taking place. The beginning is earmarked by section 504 of the Rehabilitation Act of 1973. Section 504 as stated by Schipper (1976) is a civil rights statute and contains no specific authorization for funds. However, it furthers the interests of the handicapped persons by identifying their vocational and social needs and emphasizes the fact that education and human service facilities must be accessible to handicapped people for purposes of employment.

In 1975, the Education of All Handicapped Children Act was passed. It guarantees according to Schipper (1976) a free, appropriate public education to each handicapped child aged 3 to 18 by September 1, 1978 and those aged 3 to 21 by September 1, 1980. For those aged 3 to 5 and 18 to 21, the state must offer vocational opportunities equal to those they offer students of the same age who are non-handicapped. The law also requires that an individualized education program (IEP) be

devised for each handicapped student. This (IEP) is based on current educational performance, short-term objectives, annual goals, necessary participation in special education and possible placement in regular education as a less restrictive environment. Furthermore, state and local education agencies must ensure that handicapped students have available to them the same variety of programs and services that exist for non-handicapped students such as industrial arts, home economics, and vocational education.

Another important piece of legislation affecting vocational education for the handicapped is the Vocational Amendments of 1976. According to Schipper (1976) the Amendments define vocational education as an organized education program directly related to the preparation of individuals for paid or unpaid employment. The Amendments provide states with various grants that can be used to extend, improve, develop and maintain vocational education programs. Ten percent of any basic grant or monies supplied for program development and support services must be used for the benefit of the handicapped. Furthermore, the Amendments require each state to use some of its federal funds for the improvement of vocational guidance and counseling programs, including those that serve the special needs of the handicapped.

There are, as stated by Halloran (1978), practical reasons supporting comprehensive vocational education for the handicapped. According to the 1970 census data, only 42 percent of

the handicapped were employed, as compared with 59 percent of the total population. The fact that a substantial number of handicapped students leave the educational system without basic and occupational skills may contribute to the problem of unemployed handicapped adults. Recent national research studies conducted by the General Accounting Office have identified the limited access that handicapped youth and adults have to appropriate vocational education programs as a major problem. Handicapped individuals have not received adequate access to the educational system and have less than a proportional share of vocational education provided in the public sector.

The challenge for the future as seen by Halloran (1978) is for all segments of the United States Office of Education to work cooperatively to overcome the attitudinal, programmatic, and physical barriers that exist towards the handicapped. A new level of awareness must also be created regarding the critical need of getting the handicappeds' participation in a well planned, total educational system.

Today, vocational educators are experiencing an influx of handicapped youth into their programs. To accommodate and program for these new students will require much thought and planning.

Meer (1978) stresses certain questions that vocational educators must ask themselves before they attempt to deal with the handicapped. (1) Has the student been properly placed? (2) Has the student been provided with information and explor-

atory experiences that allow him or her to make meaningful and realistic career choices? (3) What is the precise handicapped condition? and (4) What modifications must be made in either or both physical accommodations and curriculum? By taking careful and analytical view of these new student needs, a workable plan of study can be made for each student.

Sitlington and Wimmer (1978) state that vocational assessment should be an integral part of vocational education and should provide information in each of the following areas:

- (a) pre-vocational training needs, such as work habits and attitudes that need to be developed or modified;
- (b) specific vocational training needs, i.e., whether the student should be given on-the-job training or specific skill training in selected areas;
- (c) most effective training methods to be used with the student both in school and on the job; and
- (d) best placement for the student at the end of the program.

To provide the general types of program planning and decision making discussed above, Sitlington and Wimmer (1978) feel that the vocational assessment process must yield specific information in a number of different areas: These include:

(a) medical, (b) educational, (c) personal/social, (d) interests, (e) work habits and attitudes, (f) aptitudes, and (g) learning style. To obtain data in these areas the following techniques are stressed: The first is the medical examination, which consists of referring the student to a doctor for a health check up. This assessment is essential to the overall planning for the student and should be conducted before any

type of job experience is undertaken. Another, is the paper and pencil tests, which can provide valuable information in respect to academic skills, knowledge of the world of work, and general and specific vocational interests. The Manual Dexterity Tests that focus specifically on performance in such areas as fine and gross motor dexterity, use of tools, and speed and accuracy performances. The Commercially Developed Assessment Systems in which their major advantage is that development and standardization have been completed. Self-Developed Work Samples are another component of the assessment program. They are used to assess a student's abilities to perform specific work tasks, ability to use equipment and to meet skill requirements of certain types of jobs. Also, the use of behavior analysis techniques which set guidelines for observing student behavior, describes the training environment, and represents the start of the training program. Lastly, is the situation assessment which involves the observing of the handicapped individuals in an actual work situation.

However, Meer (1978) points out that there are barriers that can hinder the development of handicapped students in vocational programs and frustrate vocational instructors. One is attitudinal. That is, vocational teachers may not want handicapped students in the classroom, because normally they lack knowledge about the handicapped. The special education teacher can be of help here as an available resource. Fear or concern about the handicapped can readily be dispelled with

knowledge about them. The role of the vocational education teacher must include not only psycho-motor and cognitive skill development, but other factors as well. Many times handicapped individuals may possess the work skills necessary for employment, but unknowingly possess annoying mannerisms that stand in the way of their employment. Vocational teachers should work with the students exhibiting these problems. Working under stress and/or criticism from an employer are two other areas that need to be dealt with at great length by the vocational teacher. If these areas are worked with, the transition from school to work will be eased. Lastly, if handicapped students have problems dealing with and understanding their rights and responsibilities of their job, the vocational education teacher should assist them in getting someone to go with them to the employer to serve as their advocate.

According to Hartley (1978) an increasing number of handicapped students are entering vocational programs at both the exploration and preparation level. However, vocational educators are faced with inadequate backgrounds to work with these students. An emphasis for cooperative programs between special education teachers and vocational teachers is suggested. For vocational teachers with no special education background are teaching special needs students, and special education teachers with no background in vocational education are trying to prepare these students for employment. Hartley sees the "hands on" type of learning provided within vocational education.

and its relationship to the world of work as making vocational education the best place for handicapped students seeking job entry skills. These students must be allowed to maximize their potential through training opportunities if they are to become self-supporting members of society. If vocational skills are not provided to the handicapped, our society will pay for the loss of manpower in higher unemployment, welfare and apathy. However, if the handicapped student is to receive high quality instruction, special education and vocational education must work together to meet the challenge.

Once the handicapped student is made ready for vocational education through the vocational assessment process and recommendations from special and vocational teachers, its time to identify an appropriate training experience. Weisgerber (1978) emphasizes work study, work experiences, work placement and follow-up, as four procedures that are extremely important in developing proper training experiences for the handicapped.

The work study program as seen by Weisgerber (1978) is one that provides close supervision between special educator, vocational educator and student, and acquaints the handicapped student with relatively simple jobs. It introduces the student to common work requirements such as setting time limits in production and working with others as a team. While work study is tailored primarily to the handicapped, those students in a work experience program gain a feeling of achievement by carrying out job tasks essentially similar to those of non-

handicapped persons. The handicapped student learns not only to be competitive with non-handicapped students, but also to cope with unforeseen events and with different persons encountered on a job. Work placement involves a transition from learning to earning during which the handicapped person begins to function as a self-sustaining individual in society. Job placement is usually arranged after graduation and is facilitated by the vocational educator. The vocational educator is instrumental in convincing the prospective employer that the handicapped person is capable of performing required tasks. Lastly, the most logical extension of job placement is the follow-up. Many handicapped students want to maintain communication with their vocational instructors. This is particularly so when they are seeking advice concerning a problem on the job. The vocational teacher must be able to provide sound advice and encouragement to these students.

At this point I would like to discuss vocational education for specific handicapped groups. The first is the physically handicapped. Vocational training for the physically handicapped as stated by Young (1977) does not differ in form from programs designed for other students. Most physically handicapped students can receive training in programs where they are integrated with the non-handicapped.

According to Young (1977) there are several groups of the physically handicapped which profit from vocational education training. These include students with muscular dystrophy,

spina bifida, osteogenesis, congenital deficiencies, amputees, spinal cord injuries, and cardiac problems. Their potential in obtaining work in job areas that require only the use of the upper extremities; such as clerical work, bench work, machine operations, and data processing.

Furthermore, Young (1977) suggests that occupational and physical therapists be part of the vocational program for the physically handicapped. They can aid in getting the vocational teacher to learn to understand a disability, thus enabling him/her in making the needed modifications in the program to meet the needs of these students. Also, it is stressed that vocational education teachers can also expand their skills in dealing with these students through in-service and field experiences.

The training program for the physically handicapped as stated by Young (1977) must begin with a detailed pre-vocational evaluation which emphasizes exposure to all areas that might offer potential employment. Two broad categories stressed again are clerical and industrial. The clerical field can include a wide range of tasks from operating adding machines to complicated data processing program. Industrial training will usually require modifications to tools and machines to be used by the students. However, a great many opportunities exist in electronics, appliance manufacturing, and repair.

The next specific group entitled to a sound vocational program is the visually handicapped. Ruffino and Canterbury

(1978) mention how sight is often thought to be a prerequisite for safe and efficient machine operation in the industrial arts classroom. Experience, however, has shown that the visually handicapped student can become a safe machine operator with instruction in proper techniques. This is possible through a series of adapted procedures referred to as the "four step" pattern for safe operation of power equipment by the visually handicapped." The four steps cover techniques for:

- (1) approach and primary contact with the machine;
- (2) observing the state of rest or motion of the machine;
- (3) following safe paths from the primary points of control and points of observation of the progress of the work; and
- (4) observing the programs of the work being done.

Ruffino and Canterbury (1978) further state that although in most cases the four step process works well, there are operations that require individualization of the procedures and modifications of the machine. For example, the bandsaw and meter gauge work well for straight cuts, but when making irregular cuts, the partially blind student may need the aid of high intensity lamps and a magnifier. A totally blind student could possibly be equipped with a variable speed sabre saw with a guard pointer mounted in the front of a blade, thus allowing him to follow a scribed line.

One of the major barriers brought out by Ruffino and Canterbury (1978) confronting the visually impaired is movement within the industrial arts environment. The environment

of the industrial arts lab, will of course be different from other classrooms experienced by these students. For example, furniture will most likely be different and not in straight rows or patterns as in regular academic classrooms. This could represent a confusing nightmare for the visually handicapped. Therefore it is recommended that a tour of the shop area be conducted before the onset of the students enrollment into the program. Every effort possible should be made to build independence in these students. The industrial arts teacher can best instill and reinforce this independence by anticipating and being sensitive to the special needs of these students.

Lintereur and Miller (1978) explain that before the vocational education teacher can work with Educable Mentally Retarded (EMR) learners, they need to understand the background of this type of student. Vocational educators need to know that the primary deviation of EMR children from that of normal children is intellectual development. They need to know that EMR learners can be educated, and that education must be so designed that it will effectively train these students to develop their innate powers and capacities.

According to Lintereur and Miller (1978) vocational education is in a unique position to offer the EMR opportunities to explore interests and develop skills for use in future employment. Previously, maladjustment in school has often been attributed to the inability of the EMR to satisfy his need for achievement. In the vocational setting, achievement can be

attained when students are given a chance to enjoy activities and are able to see a purpose in what they are doing. The vocational instructor must be instrumental in providing experiences that all EMF children are able to accomplish. Success is the major factor to consider when dealing with these students.

It is also felt by Lintereur and Miller (1978) that the most vital factor for a vocational teacher of the EMR is the teacher's attitude. All the techniques and materials known to education will not help EMR children unless the teacher has a perspective attitude to understand and motivate the EMR learner.

The last group to be discussed is the homebound. Although there appears to be general agreement for providing programs for the homebound, Abramson (1978) states that data about outcomes of such programs have yet to be reported. The purpose of this study was to make a beginning in this area by presenting some evaluative data related to the outcomes of one such program.

Abramson (1978) explains how classrooms that career courses were scheduled to meet in were equipped with auxiliary telephone lines and conference telephone units. Specific course-related equipment was also placed in students homes for the duration of their courses. Classes met for three hours a week for the 15-week semesters during the Fall 77 and Spring 78. Homebound students were provided with a course outline prior to the first class session and were able to anticipate and pre-

pare for class discussions, and assignments. Via their portable conference telephones, students at home had the opportunity to participate in class discussions, to answer instructors questions and to respond to in-class students. Students were free to call instructors at times other than class sessions to discuss assignments, clarify issues, and discuss examinations and grading. A volunteer notetaker in each class copied down chalkboard notes and mailed them to the students on a weekly basis. Examinations were administered on an individual basis in the homebound student's home.

Students and instructors in the program according to Abramson (1978) were interviewed to determine their reactions to their experiences once the program ended. Students in both the fall and spring terms reported that the equipment worked well. Of those indicating problems with equipment, reported them to be slight. Homebound students further stated that they participated in class discussions and asked questions as frequently or more often than other students. Only one student did not ask questions, due to her physical handicap. All students found the course outline very helpful and frequently used them to prepare in advance for the next class meeting. The outlines also served to focus their study activities and to guide them in review for examinations.

Of fifteen instructors interviewed as stated by Abramson (1978) fourteen reported that equipment worked well. Eight instructors indicated that they altered instructional procedures

because of homebound students. These changes consisted of more verbal explanation than normal. Four of these instructors reported they used less chalkboard work and repeated questions and class answers frequently. Nine felt that the presence of a homebound student was neither advantageous nor disadvantageous. Four considered the presence of the homebound student an advantage. Only one instructor indicated that regular students reacted negatively and appeared inhibited by having a homebound student in class. Eleven instructors reported, that their homebound students participated in class discussions. Only two instructors responded that their homebound students did not actually participate in class. The amount of participation appeared to follow an equal distribution, with one-third participating more than regular class members, one-third less, and one-third the same. All of the faculty except one said they would volunteer again to teach homebound students. They expressed only a minor need to change instructional procedures and believed that the program was successful to homebound students and regular in-class members.

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Chapter 7

Vocational Education For The Handicapped

By Robert Schmidt

A parent of a special needs student worries about what will happen to their boy when he graduates from High School next year. This boy is retarded and there was no vocational training program for special needs students in his school. He will find it difficult to secure a job because he is not trained for anything.

Some students will go through endless and painful academic drills, but what they really need are basic skills for living. To some graduates, the world is hostile and bewildering, but the handicapped graduate, who is untrained, will fail at one job after another (Scheiber, 1978).

A student may appear normal as the handicap may be invisible, which makes him incapable of handling the competition in the job market without extra help. He is a victim of emotional and learning disabilities without any relevant assistance in learning how to cope with the disabilities. Where job training does exist, it is usually limited and based on worn-out stereotypes of what disabled people can do (McKinney, 1978).

All the handicapped person wants is a chance to work, be productive and live a useful life. The handicapped want a fair piece of the action and a chance to do their own thing. Many, but not all, of the handicapped can be helped through vocational education to learn some type skill.

Vocational Education will not be alone in providing for the handicapped in regular classes. (Dahl, 1978) Behind this movement toward vocational education is the sweeping Federal Legislation. In 1975, Public Law 94-142, the Education For All Handicapped Children's Act, was passed. It established the right of every handicapped child to an appropriate education including vocational education. This landmark legislation was phased in gradually. In September, 1977 the requirement for individual education programs (IEP) for every eligible handicapped child to meet the child's needs and abilities was passed and included vocational.

Another law, PL 94-482, the Vocational Education Act Amendments of 1976, strengthened the abilities of the States to provide vocational education for the handicapped. (Dollard, 1978) Included was the Five Year Plan to be submitted by each State in order to receive Federal Funding. In PL 93-112, Section 504 of the Rehabilitation Act, the effect is on both of the preceeding laws which cover the rights of the handicapped people of all ages in all areas of life. It prohibits discrimination on the basis of handicap in any private or public program receiving Federal financial assistance (Phelps, 1977),

The development of the IEP is an initial step toward appropriate programming for the handicapped student. The most important task is the monitoring of the implementation of this plan.

The Individualized Education Program (IEP) is defined as "an activity whereby Special Education will be able to

accomplish several recognized goals of the educational program in accordance with the State and Federal Law. (Cegelka, 1978) Essentially, the IEP is developed in accordance with the child's needs and ability. Within thirty days of entering the Special Education Service, the program will contain the following:

A statement of present levels of educational performance of such a pupil.

A statement of annual goals including short-term instructional goals.

A statement of the specific educational services and the instructional material to be provided and the extent the pupil will participate in the regular education program.

These plans or programs will indicate the projected date for initiation and anticipated duration of such services. The program will also provide appropriate objectives, criteria, evaluation procedures and whether the instructional objectives are being achieved. The parent-teacher communication and shared responsibility in charting the educational objectives for the child is essential (Dollard, 1978).

The IEP in Occupational Education is designed with the student's interest in mind and in accordance with the student's ability to develop his or her skills. Included in the IEP are goals for social and behavioral development. For those students who are able to be employed in their work world, these goals are important to enable them to fit into the mainstream of life.

Under Public Law 94-142, the placement Committee which consists of those responsible for the development of IEP, meet annually to review the student's progress. The key

person to the success of this endeavor is the committee manager. The fulfillment of this role is critical to the compliance of the law and to the achievement level ultimately attained by the handicapped student.

Under another provision of the PL 94-142, the extension of secondary programs for children under age twenty-one, is that each handicapped person be given ample time for competency attainment. The career education module also has important implications for the achievement of skill levels of students entering secondary programs (Brolin, 1979),

During this career awareness and exploratory phase of Junior High School, the student can be expected to develop this essential attitude and skill prerequisites to a more specific occupation. The IEP may specify that the student complete a whole or portion of the vocational sequence. The IEP may be revised up or down in relation to the student's abilities.

The law also states that vocational programs may have to be "watered down" so to speak, to fit the needs of the handicapped. If necessary, the instructional procedures should be altered from written to oral instruction in order for the handicapped to comprehend the work. If necessary, the facilities may have to be altered to make it more convenient for the handicapped. In general, the atmosphere must be made conducive to the student's education.

One of the purposes of this law is to mainstream as many as possible of the handicapped into the regular educational program.

"It can be defined as a conscientious effort to place handicapped children into the least restrictive educational setting which is appropriate to their needs. The primary objectives of this process is to provide children with the most appropriate and effective experiences which will enable them to become self-reliant adults. With this objective, it is thought preferable to educate children the least distance away from the mainstream of society. Hence, there is a heavy emphasis on movement into the regular classroom wherever possible. (National Advisory Council on Education Professions Development, 1976, Pg. 7),

Several years have passed since the passage of legislation and in some locations, little has been done in training vocational Instructors to help meet the needs of the handicapped. Inservice training programs would be the solution. But more research is necessary on how to impliment these training programs under controlled conditions. For many years, alot of words have been written on what must be done but nothing on how to do it.

At Ohio State University, the National Center for Research in Vocational Education, a paper was written by the staff members. Its purpose was to show how research and development activities can make a difference in vocational

programs. It deals with preparing educators to gain the necessary awareness and sensitivity to put them at ease in teaching the handicapped' (Hoyt, 1975).

The Comptroller General's 1976 Report to Congress acknowledges the massive proportion of the task to prepare 1.9 million classroom teachers to teach the handicapped. It gives various points that must be taken into consideration in the education of these instructors. The article concludes that the basic components of PL 94-142 can only enhance the future education for all (McKinney, 1978).

Traditionally, the Vocational Instructors and Special Education teachers are like two separate islands. The vocational Instructors have been oriented to develop programs for the non-impaired student. Many of the Instructors are middle-aged people, former shop owners, and their knowledge was gained through living and working experiences. The Special Ed Teacher or teacher of the handicapped has concentrated most of his or her efforts on programming for young children with special needs. Most of these teachers are younger, recent college graduates and naturally they think differently. However, in order to educate the handicapped in vocational programs, close cooperation is needed between teacher and instructor (Schmidt, Tressel, 1979).

Many students placed in Vocational programs, have reading or writing problems or both. The average vocational classroom is rather large with many students, so it is impossible for the vocational Instructor to give the handicapped the proper help in writing and reading. This is where cooperation from the Special Ed Teacher is needed

because they can help the student with the necessary trade information (Jensen, 1978).

It has been found that many handicapped students placed in vocational education programs have not been identified as to their problems. This hinders the vocational Instructor involved. This is the fault of the Vocational and Special Ed Administrator and the Special Ed Coordinator. Most Instructors have never been briefed on how to handle all different types of handicapped children.

Each Special Ed Teacher has been thoroughly trained in writing IEP for each of their students, but many vocational Instructors know little or nothing about them. Also, in some vocational programs, IEP would be quite difficult to write as the programs are very flexible. For example, a Body and Fender program Instructor could be giving instructions on how to mix paint for spraying today and tomorrow he could be giving a demonstration on how to install a windshield. The next day, it could be on aligning a front end or on how to estimate a wreck that just came into the shop. Therefore, the short-term goals and objectives would have to be changed and the Instructor could not keep track of each activity of the handicapped student when placed in a large class. Following an IEP in a Special Ed Class is easier because of the small classroom atmosphere and the smaller number of students with aids to help out. These situations as described above, are not subject to interferences or changes in plans.

In most Special Ed classes, each student is doing about the same thing at the same time whereas in a vocational

class, twenty different operations involving twenty different students could take place at the same time. Some programs can be watered down or made simpler, but paint labels cannot be changed nor can front end alignment be achieved in any other way (McKinney, 1978).

Although the mandates are here, many of the smaller schools will have difficulty in following them because of the lack of funds or facilities. Larger schools can set up different programs for the handicapped, but the smaller schools cannot.

In conclusion, most Instructors do the best they can under the conditions they must work. However, their goal is to give the handicapped the best education possible. Now, the general public must rid themselves of the old attitudes regarding the handicapped, not matter how severe the handicap is. We have to change the low-expectation syndrome that has limited handicapped people in their goals and shut them out of the working world. This will take the cooperation of all involved in order to make Vocational Education for the Handicapped a reality.

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Chapter 8

Competency-Based Vocational EducationAnd Curriculum Development

By Patricia Laino

Any educational movement as complex as competency-based vocational education (CBVE) is certain to raise a great many questions. Couch and Henry (1976) researched and discovered several characteristics which distinguish CBVE from traditional programs. The CBVE curriculum is based on performance objectives, criterion-referenced measures and performance guides. The objectives are measurable and based upon actual work tasks. Students are evaluated on demonstrated competency which they are accountable for and the instruction is individualized. Students may enter or exit a program at any time.

It doesn't matter whether a program is competency-based or performance-based, because to distinguish between the two would not be very important. Hirst (1977) feels that by whatever name it may be called, it is essentially a performance-based program. In simple terms, competency-based vocational education is a systematic approach to instruction. It is based on job-derived standards, supported by feedback and aimed at accountability. It has basic components and regardless of what they are called, CBVE programs are basically the same.

Hirst (1977) breaks down the CBVE system into ten basic components as follows:

- 1 Employment opportunities determine whether a program is needed. This is a main factor.
- 2 Identifying tasks that workers perform.
- 3 Obtaining or developing occupational inventories and compiling a list of tasks.
- 4 Analyzing and using occupational survey data.
- 5 Analysis of existing materials and media.
- 6 Develop needed materials and media.
- 7 Developing lesson plans.
- 8 Test new materials and media.
- 9 Revise materials and media by using the data collected from student performance records to identify the objectives that appear to be ineffective and revise accordingly.
- 10 Reviewing and updating the task analysis. Keep your instructional programs responsive to changes in the job.

CBVE systems may have more or fewer steps, but these ten steps are what the basic system is all about.

The success of any project is in direct proportion with the time spent in the planning, training and involving the appropriate professionals. West (1976) states that school systems moving toward CBVE must first develop a logical plan in sequence that will ensure symbiotic harmony within the system. Vocational educators are being called upon to be accountable and to do this, the concept of CBVE should not be cataclysmic but planned and well thought out. According

to West (1976), a human resources development task should be developed and include: an initial thrust from top state leadership, broad presentation through various media, training in CBVE to all involved, and support from vocational persons.

The implications for school systems by competency-based education could be exciting and valuable, but Spady (1978) feels that it ranks as one of the most misused and misapplied concepts in American education today. If CBVE means a continuous progress approach to instruction and certification for all students, then it appears that in order for CBVE to succeed educators, policy makers and the public will have to be willing to depart from the traditional educational assumptions and practices.

Spady (1978) states that CBE can be fundamentally geared to improving student opportunities in several ways: a) by dealing with time and opportunities for meeting goals more flexibly and realistically; b) by giving a specific content referent to assessment, evaluation, certification, and promotion criteria, and d) by bringing schoolwork closer to the real factors affecting success and fulfillment in life.

Criterion-Referenced Measurement (CRM)

As stated earlier, CBVE is based upon objectives that are evaluated by criterion-referenced measures (CRM). The concept of CRM is not new; in 1918 Thorndike made distinction between two evaluation systems, except, he did not use current terminology (Thorndike 1956). Glaser (1962) provided practical

implications that have prompted a great deal of research in CRM and norm-referenced measures since 1962.

Silvius & Bohn (1976, 325) make the distinction between these two approaches as follows: A criterion-referenced measure identifies a student's competence in respect to an established and validated standard. Criterion levels can be established at any point in instruction. It is when a learner's performance is compared with some established criterion rather than with other students. A norm-referenced evaluation compares the competence of a learner to the capabilities of others at a similar grade level. It determines that one student is more or less proficient than another, but does not tell the proficiency of either student in respect to the subject matter task identified in a performance objective. A comparison of CRM and norm-referenced characteristics are clearly illustrated by Smythe et al (1973). (Appendix A)

Kagan & Lang (1978) refer to the two kinds of tests that can evaluate a learner's performance in a very clear manner. A criterion-referenced test establishes some absolute standard (criterion) regarding what the student should have learned in a particular unit. Norm-referenced testing assigns a score to the student in comparison to those in the student's class, rather than measured against a standard. Tests can be used to rank a student (norm-referenced measurement) or to determine to what degree a student has met a standard (criterion-referenced measurement). Kagan & Lang (1978) state that the biggest problem with criterion-referenced measurement (CRM)

is that it's sometimes difficult for the teacher to set the criterion that establishes the minimal level of competence and that in practice, it is limited. Kibler et al (1974, 19) point out that some educators today feel that the purpose of education is not to determine who learns more or less of a given subject matter, but rather to see to it that all students learn what is considered necessary. If one takes this viewpoint, then CRM would be the best choice. As a result, all students could be required to achieve the same mastery on each objective. Kibler et al (1974) feel that both norm-referenced and CRM sort students out based on performance, but the difference is vast. In CRM the student's performance is in no way based upon the performance of another student. If the performance goals are important in CRM, then the teacher should be concerned with this and not peer relationships.

To implement CRM one must prepare a set of instructional objectives. If you refer to competency-based education they are called: 1) Major objectives in the Instructional Support System of Occupational Education (ISSOE), 2) Performance objectives in the Vocational Educational Consortium System (V-TECS), and 3) Behavioral objectives by many educators. Reference to various behavioral taxonomies will provide guidelines to insure that instructional objectives are prepared for any necessary higher level skills and competencies required for mastery of the instructional unit. Gagné (1977) technique regarding task analysis proved to be very useful in preparing objectives. Gagne maintained that mastery of

subordinate skills preceded mastery of superordinate skills and this is not a new idea. All educators know that one must master basics before advanced tasks can be mastered. Gagné (1977) provides an important and helpful method called behavioral analysis which provides the prerequisite skills needed for a given terminal objective. The question is "what must a student already know in order to learn this skill?" This can best be explained by the hierarchy of organizational skills. The results of a behavioral analysis is arranged in a hierarchy, with the terminal objectives at the top (delivers an organized speech) and the necessary entry behaviors at the very bottom (writes correct sentences and finds related materials to topic). (Appendix 8)

After objectives are prepared for the unit of instruction, then appropriate evaluation procedures must be selected, according to Kibler et al (1974). The appropriateness of the evaluation tool (s) will largely be determined by the nature of the competency specified in the instructional objectives. It is necessary to match the particular evaluation procedure selected with the performance behaviors delineated in instructional objectives. Complete operational definition of a particular mastery depends upon the establishment of an absolute performance standard which the adequacy of each student's learning may be weighed and judged. Such a standard should specify the exact skill (s) a student must demonstrate before it is said that the student has mastered a particular content and that it is absolute in the sense

that it is set prior to evaluation and serves as the sole criterion against which the student's performance is measured (Kibler et al, 1974, 129).

An important point to remember is that we are talking about evaluation with CRM and not grading. CRM is concerned with the effectiveness of teaching and not the relative success of students. Students are not compared in CRM, but rather, have they succeeded in reaching their objectives. CRM is meant to establish whether or not a student has attained each of the criterion behaviors and not to spread students out along a normal bell curve. Ideally, according to Roundtree (1974), almost 100% of the students would attain 100% of the objectives. In norm-referenced measurement, that test would have been too easy, but in CRM it would be considered highly effective. Teachers tend to look to the bell curve and fulfill the prophecy of a few doing well, a few doing poorly, and the majority in the middle. The students should be measured (or graded) on their attainment of objectives and not compared to the standards of other students. A comparison is shown in the X-Y distribution chart. (Appendix C)

Hayden & Torkelson (1973) address the current concept of focusing on the learner. For years education was based upon group instruction designed to meet the needs of the "average" student. Today with the movement toward competency-based education, individualized instruction and criterion-referenced measurements, the focus is shifting to the learner.

Competency-based education (CBE) means that a student can progress at an individual rate, strive toward performance objectives and be evaluated by CRM.

Wentling & Lawson (1975) point to constant evaluation as the choice of referencing in meeting measurement goals. The question to be asked before a measure can be made is: Is our task really to "sort out" learners or do we want to determine when a student has attained a specific competency?

Modular Approach to CBVE

The application of the modular approach is a systematic method of identifying and describing self-contained sections of content and skills which, together, make up an entire career area (Dupuis & Bell, 1974).

Advisory boards must be utilized and workshops for teachers must be conducted. The major goal is to identify required competencies for all areas to be offered. The curriculum content has to be described in terms of units, modules, and tasks. A broad content unit is identified, then modules, relevant to the unit are described. Finally, specific tasks for each module of each unit are identified. The career field description is conducted by consultant teachers and next the advisory board conducts a validity check. Tasks must be put into behavioral terms with defined specific activities, materials to be used, time required, and the criteria for evaluation. Tasks for each module are stated as performance objectives and students could progress

at their own pace.

According to Dupuis and Bell (1974) as students proceed through each task, module, and unit, they are closely monitored by the instructor and progress is recorded and stored in the computer.

A modular approach to curriculum appears to have many advantages such as: students move at their own rate and can work independently, student performance progress can be permanently recorded and easily retrieved. Advisory boards are actively utilized and this is one of the best approaches to CBVE.

The Curriculum Delivery System in Florida (FACIT)

The Curriculum Delivery System is Florida's approach to competency-based individualized teaching (FACIT). This learning system provides vocational educators with the knowledge and skills necessary to implement and manage individualized, competency-based vocational programs (DCBE, 1977). This system itself (called FACIT) is individualized and competency-based and it is practical rather than theoretical in nature.

FACIT materials are flexible, include pretests and post tests, and gives the student an opportunity to practice the skills that are taught. Students need only to undertake the instruction they need, thereby creating individualization instruction. Upon completion of the instruction, the student can be certified as having attained specific, measurable

teaching competencies (DCBE, 1977). There are six components, packaged separately so that anyone using this may select all or any part of the FACIT system. Included for each component are the competencies, specific objectives and the types of learning options available.

The FACIT System includes an introductory booklet and filmstrip to not only introduce the system, but as a guide for use in the future. DCBE (1977) states that the materials are geared to the practicing vocational teacher and specific components can be used for the teacher's own specialty area by selecting specific FACIT components. This curriculum delivery system appears to be Florida's answer to ISSOE. The components are the same such as goal setting, objectives, criterion-referenced testing, learning experiences, evaluation and instructional management.

Vocational-Technical Education Consortium of States (V-TECS)

V-TECS represents a group of seventeen states, the U.S. Air Force Training Command, and the U.S. Naval Education and Training Command grouped together representing the Vocational Technical Education Consortium of States (V-TECS). The primary purpose was to develop valid catalogs of performance objectives, criterion-referenced measures and performance guides for learners in vocational-technical education.

The V-TEC model for developing catalogs, according to Spillman & Bruce (1976), has well defined steps and quality control processes. Each state in the consortium

is assigned a minimum of two catalogs to develop and may bargain for their choice. The first effort is to identify all materials in the area for which the catalog is being developed, then interviews with workers on the job are conducted and a list of tasks are developed. An occupational survey and occupational task analysis is then completed. A team then writes the performance objectives and criterion-referenced measures. Before the final write up, they are tested in the field

Spillman & Bruce (1976) state that the revision cycle completes the model, assuring that revision to keep up with technological developments will take place.

The Instructional Support System for Occupational Education (ISSOE)

The curriculum management system adopted by New York State is ISSOE, although they have recently joined the consortium of states representing VTECS. ISSOE provides teaching flexibility and individualized, competency-based instruction for students.

In 1974 the Cornell Institute for Research and Development in Occupational Education in cooperation with the Office of Occupational Education, several educational agencies, and a computer agency undertook the development of a modularized performance-based curriculum for individual students that can be systematically evaluated for progress and achievement on a systems basis. Hopefully, by 1985, all occupational

education programs in New York State will be available within the ISSOE system (Cornell, 1976).

It has been designed to support and facilitate instruction by systematizing the functions of monitoring, reporting, and evaluating occupational programs. To serve these functions, ISSOE operates on several levels simultaneously; individual students achievement is reported, and the system offers local, regional, and state monitoring. Any or all of these three functions may be served within a classroom, within a district, or across New York State.

The system has been developed to assist teachers in thinking critically about what they teach, how they teach, and what the results of their teaching are. It is designed to improve teacher management of class environment without limiting flexibility of instructional approaches.

Hirst (1977) states that the development of a competency-based program is not easy. Hundreds of teachers, regional coordinators, and research specialists have been involved in developing the New York State system.

The ISSOE curriculum package is a concise epitome of objectives which lead to employability in the "real world" of work. Generated by teachers, it defines what the students should be able to do (objectives) and specifies when it is known whether a student can do it (criterion-referenced measure).

Objectives have been based on task analyses. Major objectives are written in behavioral terms. Related objec-

tives have been arranged in modules to facilitate instructional planning.

The behavioral approach to curriculum development presupposes that a learner can demonstrate through his performance (behavior that can be observed) that he has acquired a particular knowledge, a particular attitude and/or a particular skill for which the curriculum was designed. This approach calls for objectives to be stated in behavioral terms that answer such questions as: What kind of behavior should the student be expected to demonstrate after having been through a learning activity? How are students' behaviors expected to be changed by a learning activity? (Finch 1971).

Learning activities have generally emphasized intellectual development. The educational system has been directed toward the learning of facts, concepts, and ideas primarily found in textbooks and related materials. However, educators are now addressing more attention to actually developing learning activities that emphasize more than just intellectual knowledge. More attention is being directed toward attitudes, interests, motor skills, values, etc. (Wykle, 1978).

A behavioral approach lends itself to a more valid evaluation. The behaviorally stated objective frequently identifies the evaluation technique necessary for the student to demonstrate the extent to which he has acquired the desired behavior.

The purpose of writing objectives is to identify, specifically, the outcomes of learning that are desired. In

classifying educational objectives, Bloom (1974) separated them into three domains: the cognitive, the affective, and the psychomotor. The cognitive domain deals with knowledge and understanding. The affective domain deals with values, attitudes and interests. The psychomotor domain deals with relatively simple motor skills, like typing and walking as well as the more complex skills of talking and writing.

The popularity of the educational objectives movement is not surprising because it is an outgrowth of the views of the nature of learning held by most learning theorists. This movement is also congruous with current growths in educational technology such as programmed and computerized instructional materials (Marland, 1978).

Evaluation is the means by which educators are able to measure learning and assess materials. Teachers must evaluate learning constantly in order to be able to present subject matter to students in the best possible way. When instruction does not achieve its goal, it must be revised to meet the needs of the individual student. Through a system of constant evaluation and re-evaluation, curriculum is revised to meet current standards. Generally, there are two kinds of evaluation: formative and summative. Formative is undertaken while the new program is being developed and summative is concerned with the effectiveness of the program (Gagné & Briggs, 1974).

Testing has been the most common and traditional means for determining the teacher's responsibility for evaluating

students. It serves several purposes: to determine what progress is being made; to discover weaknesses; to seek opportunities for improvement of methods, procedures, and content; and to check end-of-course status (Driska, 1978).

The mastery of several performance objectives would enable the student to demonstrate a competency. The teacher selects those competencies that meet the objectives and that are needed for entry-level workers, consumers or citizens. The teacher then constructs performance goals for the selected competencies and constructs tests or other appropriate measuring devices.

The suggested instructional content, as well as the criterion-referenced assessment items provided in the ISSOE materials, offer the teacher the option to proceed with each module and to use the test material included in the unit or to adapt it to their particular needs.

The units or modules are prepaced with the major objective of that particular module. This major objective states exactly what the student is expected to accomplish; how the student is to proceed to accomplish the task, the amount of time in which the task should be completed and the desired outcome, e.g. with 90% accuracy or in accordance with good office standards, etc.

The enabling objectives further state the specific skills that are necessary to accomplish the task. Before the student is able to evaluate his progress in terms of the major objective, he must master the individual skills outlined in the enabling objectives. 120

In order to assist teachers in individualizing instruction, the ISSOE materials also list next to the enabling objectives, suggested instructional content. This outline of suggested materials may be used by the teacher to aid in the individual instruction of the specific skills required to master the major goal of the lesson.

Accountability in Education

Teachers today must be concerned with competency-based curriculum, because instruction must meet individual differences in the learning abilities and interests of students. Gagné (1977) established the theory that educators must focus in on what is learned, rather than solely upon the conditions that are obtained when learning occurs. The types of outcomes that learning has or the varieties of learned capabilities must be observed as human performances and from these acts inferences can be made. CBVE is the vehicle that can provide for individualizing instruction and is based on performance objectives which are measurable.

Accountability is being emphasized more and more. School and its educators who operate them must be "held to account" for what they produce as educational outcomes (Browder & al, 1973). There is nothing new to the goal oriented approach. Instead of telling students how to do things, tell them what can be accomplished. As early as the 18th century, B.C., King Hammurabi had a simple building regulation that if a house collapsed and killed the occupant, the builder would be executed! While this might be a little

harsh by today's standards, educators could do well by looking at this goal-oriented concept. We can't hope for accountability unless teachers have defined what the student is accountable for. The development of relevant, achievable and measurable performance goals is needed and this can best be accomplished by CBE. Also, federal and state intervention has occurred to insure accountability (PL 94-482). In the future, educators must accept the challenge to demonstrate accountability and show that they are answerable for the end-product. Competency-based education is designed to support and facilitate instruction by systematizing the functions of monitoring, reporting and evaluating programs and this in turn, will allow the teacher to be more accountable for their teaching results.

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Appendix A

Comparison of General Characteristics of
Norm-Referenced and Criterion-Referenced Evaluation Systems

Norm-Referenced System

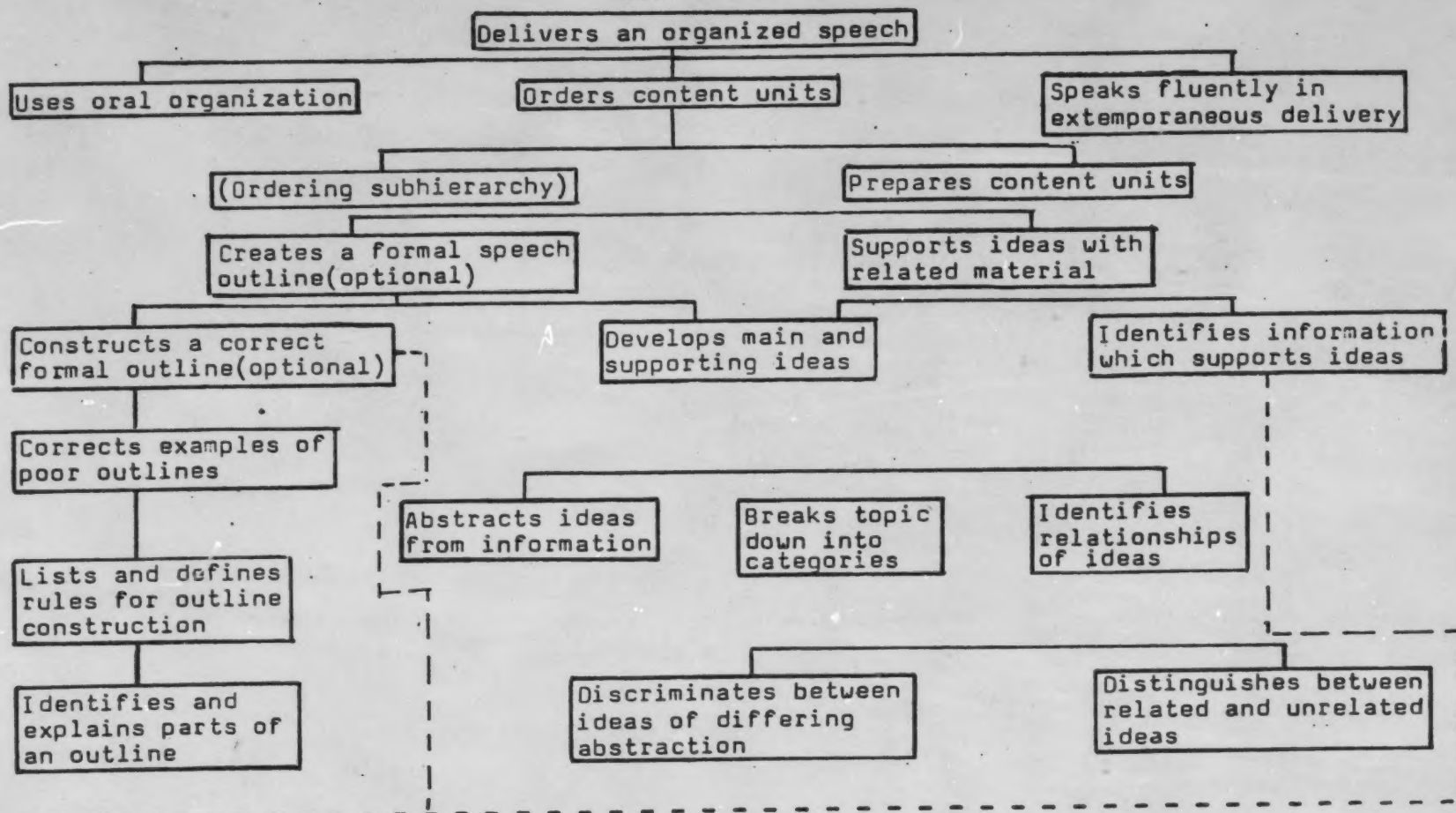
1. The main function of norm-referenced evaluation is to ascertain the student's relative position within a normative group.
2. Either general conceptual outcomes (usually done) or precise objectives may be specified when constructing norm-referenced evaluation.
3. The criterion for mastery is not usually specified when using norm-referenced evaluation.
4. Test items for norm-referenced evaluation are constructed to discriminate among students.
5. Variability of scores is desirable as an aid to meaningful interpretation.
6. The test results from norm-referenced evaluation are amenable to transposition to the traditional grading system. (A,B,C,D,F).

Criterion-Referenced System

1. The main function of criterion-referenced evaluation is to assess whether the student has mastered a specific criterion or performance standard.
2. Complete instructional objectives are specified in the construction of criterion-referenced evaluation.
3. The criterion for mastery must be stated (i.e., instructional objectives) for use in criterion-referenced evaluation.
4. Test items for criterion-referenced evaluation are constructed to measure a predetermined level of proficiency.
5. Variability is irrelevant; it is not a necessary condition for a satisfactory criterion-referenced evaluation.
6. The test results from criterion-referenced evaluation suggest the use of a binary system (i.e., satisfactory-unsatisfactory; pass-fail). However, criterion-referenced evaluation test results can be transposed into the traditional grading system by following a set of specifically constructed rules.

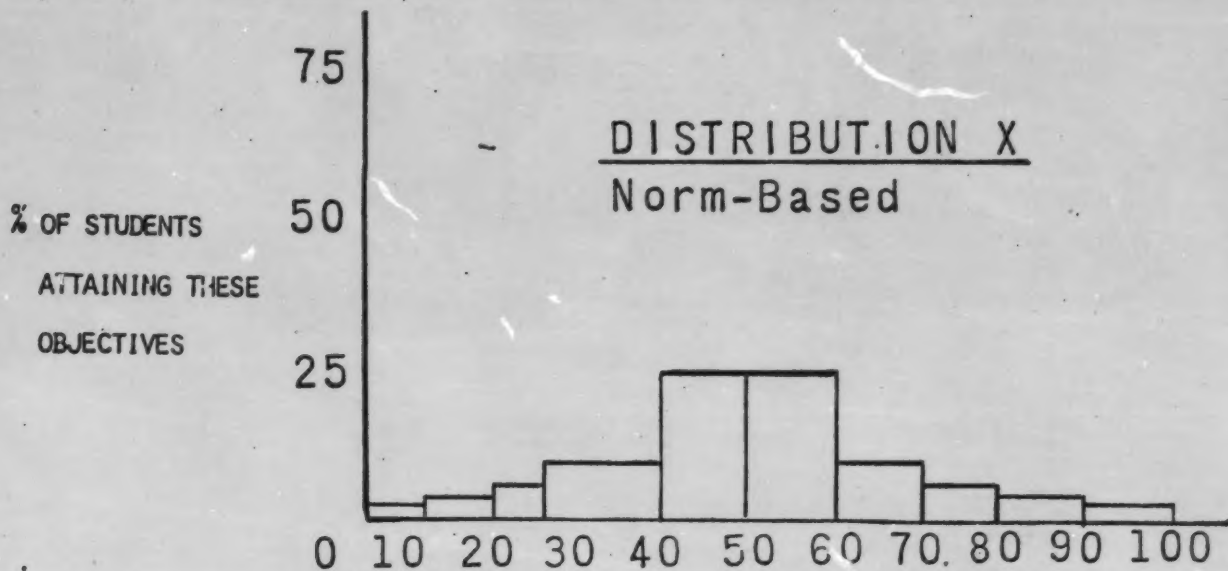
(Smythe, Kibler & Hutchings, 1973, 117)

Appendix 8

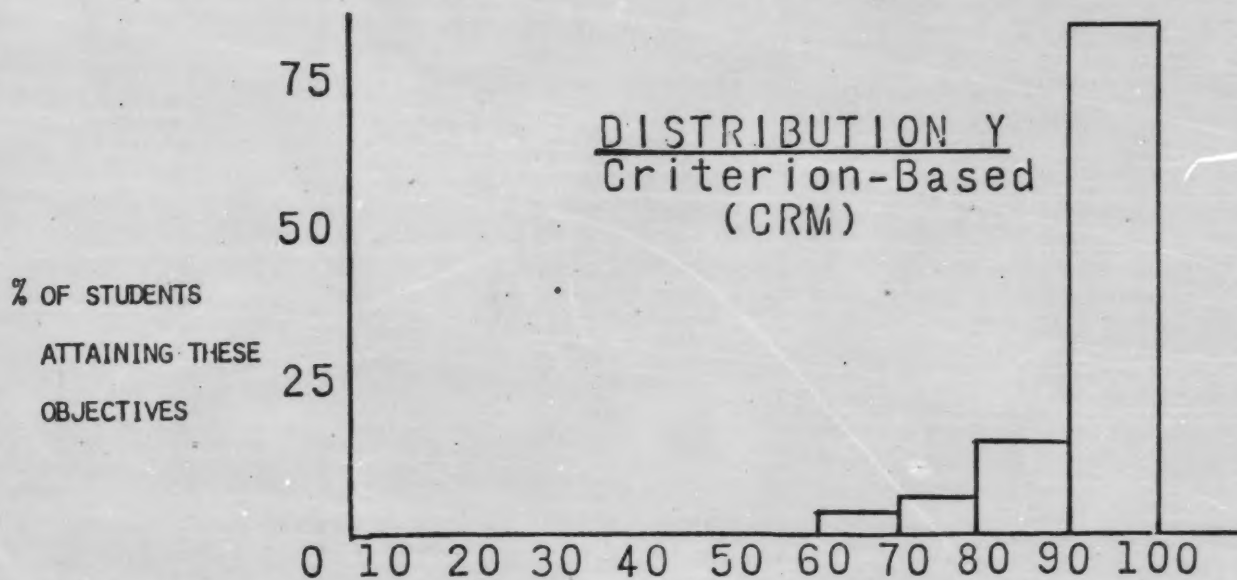
Hierarchy of Organizational Skills

TEST DISTRIBUTION

PERCENTAGE OF OBJECTIVES ATTAINED



PERCENTAGE OF OBJECTIVES ATTAINED



Chapter 9

Technological Change and Curriculum Development

By Timothy Battles

We have reached a point in time where it is no longer possible for the individual to live his life in ignorance of technology. There is a critical need to understand technology so that an individual may participate in establishing the goals which direct a technological society. Education carries a great deal of responsibility to inform or educate people to this end. Laudicina and Laudicina (1977) compare 20th century ideas with the relatively basic Protestant Ethic of the 19th century, in which it was relatively easy for man to understand and explain the new technology with which he lived and worked. However, with today's rapidly expanding technology and continuous change, people must be prepared for vocations that do not yet exist and must allow themselves to change direction when necessary.

Gray and Seder (1978) describe a curriculum project undertaken in the state of West Virginia. This curriculum was set up around the concepts of manufacturing. The program was to introduce the student to the fundamentals necessary for his understanding of the makeup of our technological society.

The original curriculum structures consisted of twelve units based on a contemporary study of the manufacturing industry. Although those units identified were an appropriate representation of the modern manufacturing industry, the

students lacked a general background to make the course successful. With this problem the curriculum was broken down to produce a continuity between the learner's past experiences and course content. This set up the five manufacturing systems: 1. Basic factory system of manufacturing. 2. Mass production factory system. 3. Automation factory system. 4. Household system of manufacturing. 5. Handicraft system of manufacturing.

Utilizing the family as a starting point for the study of manufacturing also enabled the developers to classify the assumptions upon which the course was based. These were: Man/Woman is: 1. a social being 2. a producer 3. a problem solver 4. a consumer.

The last revision of this curriculum set up the nine technological determinants. Those were: work, population, environment, institutions, tools, materials, power, communications, and transportation. The final curriculum structure consisted of the four assumptions of man/woman, the five manufacturing systems, and the nine technological determinants.

Being aware of technology and trying to understand it is the first step we must take in order to function in such a society. The next step we must take is to apply our technology directly.

Technology transfer is an emerging area of service for the community college. This is based on partnerships with community college consortiums, regional or university research centers, and the federal government. Such partnerships can become powerful forces for change at national, regional, state, and local levels.

Myran (1978) points out that technology transfer is an effort to bring the results of research and development to new users, and it is coming of age on the domestic scene. Due to such urgent national problems as energy conservation, pollution abatement, and economic development, an intense federal effort is underway to transfer information and expertise developed through federally funded research to domestic applications.

Technology transfer calls for the transformation of research and technology into products, processes or services, or it calls for the application of research developed for one purpose to a secondary purpose. Often, technology originally developed for military or space work can be put to use, as in a fire prevention technique created for the space program that might be transferred for use in home construction (Myran, 1978).

The Cooperative Extension Service is a natural network which links university research centers with local agricultural groups and individual farmers. This network has the primary objective of transferring new technology from the research laboratory and experimental station to the fields and barnyards or rural America.

In our technological society life has been made much easier for us, but at the same time it has caused some problems, among them our overwhelming need for energy. Our overwhelming need for this energy has ended with today's energy crisis. The many facets of the energy crisis lend themselves so well to education that if it had not occurred educators might have

invented it. Some people, of course, think even now that it was invented (Fowler and Kruger, 1979).

The energy crisis will be with us for a decade or two at least. It seems to take five or ten years for the educational system to respond to a social issue. Books have to be written, professors have to read them and design courses. As Fowler and Kruger (1979) point out, education responds to crisis with "glacial dignity." The solutions to the crisis, or at least the changes in the system that will lead toward solutions, will also be glacial-like in their coming.

It is possible to put a rough time scale on the most important problem areas by dividing them into short-range and long-range categories. Those on the short-range list are upon us now in full force. The decisions or nondecisions that will govern their effects will be strongly felt between now and the mid-1980's.

The long-range problems are already visible in the cloudy crystal ball of the future. We have some time to contemplate them and look for possible solutions, but they will occupy and test us during the last decades of this century and the early decades of the 21st.

Vocational education must respond to both of these problems. Specific responses already in evidence include more attention to efficiency in all phases of transportation where about half the oil is burned. The vocational curriculum may have to feature engine performance and efficiency as predominantly as it does auto repair.

All the construction trades have been affected to some degree by America's realization that we must conserve energy, develop new energy sources, and use energy more efficiently. Residential commercial and industrial building designs are being changed with those goals in view. So are the energy-using systems within the buildings. Fillippni (1979) points out the learning requirements on a particular craft's existing work skill can vary all the way up to the extreme of developing entirely new specialties within a craft.

The Sheet Metal and Air Conditioning Industry set up the National Training Fund (NFT). The NFT charter requires that it anticipate as well as meet present job needs. The NFT commissioned Syracuse University in 1976 to survey the implications of technological change on sheet metal industry training needs. Among other skills needed for the installation and retrofitting of such things as solar energy.

The NFT has had a direct impact on vocational education; through the use of films it has produced, workshops it has sponsored, and college courses it has offered to vocational educators.

Fillippni (1979) also points out that vocational educators in the sheet metal industry have felt the impact changes in construction related to energy and are meeting the challenges that such changes present and the sheet metal industry has

benefitted by being assured that its work force is well trained, adaptable, and capable of a high degree of excellence.

Farming is the backbone of this country and it has some challenging times ahead. The new techniques and technologies that are going to be developed will provide a challenge to vocational education to keep the future farmer in step with these changes.

As Price (1979) points out, food is essential, and the cost of food is of serious concern to the consumer. The excellent record of increased efficiencies of production has made it possible for U.S. consumers to pay less for food, based on disposable income, than any other people in the world. Higher energy prices and a leveling off of productivity likely will mean a gradual change in this very desirable characteristic of our U.S. food supply system. The educational programs in our high schools and colleges have been an important factor in agriculture productivity in the past, and if high productivity is to be maintained, education will play a very important role in the future.

The energy problems will likely bring about new technological, biological, and social adjustment (Price, 1979). In the area of conservation, heat exchanges are being used to recover wasted heat from the cooling of milk to heat water for the washing of milk-handling equipment. The use of nitrogen fertilizer produces at least one-third the food producing capability of the world.

Nitrogen fertilizers are manufactured from natural gas thus directly related to energy consumption. The operation and understanding of new equipment, such as heat exchanges, and a thorough understanding of the use of the right amounts of fertilizers are just beginnings of the future challenges of vocational education.

Technology plays an important role in vocational education, not only in what we teach, but also in how we teach it.

According to Splitterber (1979), the computer from the mid-1950's to the present has had the potential to individualize instruction, improve school production, and assist in management and administration of elementary and secondary education. There seems to be a lack of implementation of instructional uses for computers which ^{has} led to very different and even contradictory predictions about the revolution of computer-based instruction for public education.

Splitterber (1979) describes two categories of computer based education. The first is Computer Managed Instruction (CMI). CMI is defined as an instructional management system utilizing the computer to direct the entire instructional process, including traditional forms of instruction which do not require the computer, such as lectures and group activities. The second is Computer Assisted Instruction (CAI). CAI is defined as a teaching process directly involving the computer in the presentation of instructional

materials in an interactive mode provide and control individualized learning environment for each individual student. The major differences between these two categories is the CAI functions as "Teacher" and CMI functions as "Manager" of instruction. CMI is usually required to manage CAI data generated by students, but CAI can operate by itself. Where either CAI or CMI is employed there will still be the need for traditional instructions directed by the classroom teacher.

A large gap exists between the potential and actual implementation of computers in the public schools. Splitterber (1979) presents three major reasons for this--economic, educational, and technical. The technological and economic problems are quickly being resolved through the use of minicomputers and microcomputers. The problem in which specific instructional techniques effect one educational setting cannot be generalized to the other settings. A fourth reason for the wide-spread ignorance among classroom teachers is the computer's potential and adaptability. Even though the educational community has its reservations, every program designed to individualize instruction for a large number of students will probably require some type of CMI or CAI system.

Equipment for today and especially for tomorrow should provide all types of information at the fingertips of all learners. This statement was made by Professor Jerry Torkelson as he was discussing the future of educational media at the

Association for Educational Communications and Technologies 1978 convention (Cherry, 1978).

Speaker Bruce Johnson of Films Incorporated talked on the basic concept of "Media Literacy". Media Literacy expands the definition of literacy to include forms of communication in addition to print, television, film, radio, audio, and video recordings, telephones, and computers. Johnson also discredited the "common misconception" that machines will replace teachers as technology advances. He recommended that communications specialists learn about media technology to control it rather than be controlled by it.

Cherry (1978) quotes another speaker at this convention, Tom Hope, publisher of Hope Reports. Media of the future will be smaller, simpler to use, and more flexible. The most ideal media will be portable, accessible, and able to process digital information. Education will benefit most from media that can monitor, measure, and evaluate learning.

Nasman (1978) states that while educators quibble about the capacity of technology for revolutionizing education, while they focus discussion on large computer systems, entrepreneurs are marketing and parents are buying low-priced microprocessor-based devices designed specifically for teaching.

Nasman (1978) points out that a revolution is indeed underway. It is now possible to purchase computing power for

less than \$1,000 that you could rent five years ago for more than \$1,000 per month.

The advent of microprocessor-based teaching devices is not all analogous to any recently introduced teaching aid. Observers have compared the invention of movable type and the computer. At first they were expensive because they were made by hand. Now a book with hundreds of pages can be typeset, printed, and on sale in a matter of days. Low-cost availability of the printed word drastically revolutionized education. Similarly, the computer started out as an expensive handmade product. Now microprocessors are quickly and inexpensively manufactured. The primary difference is that educators were allowed 400 years for the book-adoption process. With computers, they may have no more than four years.

Hoffman (1978) describes an open learning system in grades k-12 as if it were the year 2000. The system he describes is made up of three major components.

The first, Hoffman (1978) describes is an Instructional Television (ITV) network. Students spend only three hours per day in a formal school setting, where teaching professionals provide small group instruction in activities which require trained professionals human interaction with students. Students receive the rest of their formal instruction-mainly in basics-through ITV either at home or at various community centers which are supervised by non-professionals.

The second component of the open learning system is a Computer Based Education (CBE) program which utilizes both Computer Assisted Instruction (CAI) and Computer Managed Instruction (CMI). There are remedial and supplementary CAI programs in the community centers and in the schools. Periodic reports and all accompanying record keeping are automated with copies sent to the teaching professional and the students' hours.

The third component Hoffman (1978) describes is a comprehensive apprenticeship program. Ongoing needs assessments reveal skill which contribute directly to survival in the real world, and students at all age levels practice these skills in simulated and real situations. Actual experience apprenticeships are not assigned before a student reaches 12 years of age.

In order to assure ample opportunities for student apprenticeships, the federal government supports participation of businessmen and corporations in the program by providing tax breaks and stipends to those who sponsor apprentices. Federal and state agencies are required by federal law to support a given yearly quota of apprentices. Duration and success of apprenticeships are based on merit, just as in the real world.

Vocational education of the future needs to keep pace with society's rapid changes and technological advances in order to provide students with a solid base from which to work.

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Chapter 10

Facilities Planning And The Curriculum

By John R. Occhipinti

Total educational costs in the United States have more than doubled from \$27 billion in 1960 to \$70 billion in 1970 and are continuing out of control (do not have 1979 data).

Most architects who specialize in the design of public schools are in despair because, in their anxiety to reduce costs, the public is focusing on the wrong things without first correcting the fundamental problem, which is the school itself. Most students attend classes in a rectangular, multi-storied brick structure divided into identical classrooms. These schools are inflexible and tend to isolate teachers from teachers and pupils from pupils (Ashley, 1972).

The time has come to stop talking about building an elementary school or high school for X number of students, and to start talking about building community learning centers. These centers could include neighborhood child day care and adult education programs, health centers, recreational facilities and libraries. If the taxpayers themselves were to gain direct benefits from such a center, they would be willing to approve more bond issues. With the new trends of having many careers in a lifetime the need to return to school is real. Why separate pupils and adults during the school day - they are not incompatible. Why not build structures and programs that can accommodate both? Pupils would then see that people do enjoy learning and might become motivated. It would water down the effects of drugs, vandalism, and poor attitudes.

The basic fact is: the educational program should determine the need for space - not the architect - not the budget - not the school board (Campbell, 1978).

The best route to quality facilities centers around a team approach. This team should consist of: Teacher, Administrator, Consultant, Architect, Project Manager, and School Board liaison. The architect should never be put in the position of practicing education and determining the nature of the educational program. Forced to play educator, the architect turns out a building that is less than satisfactory. This practice is common because of the awe given an architect, which is not particularly warranted, as an architect is one of the few professions (similar to airline pilot) which does not require a college degree. The typical planning session has the board reviewing the plans that an architect had drawn up. Forced to play educator, the architect's talents are short. Here, design changes are difficult to make due to the need for drastic plan revision. At this point communication usually breaks down. When school boards and college trustees do not receive complaints, they assume things are proceeding well and approve the plans and authorize the go-ahead (Campbell, 1978).

By the time the teacher is taken into this scheme, it is way after the fact, and no more changes would be made for 50 years. A teachers role in planning shops and labs is quite important to note. Sometimes valuable points of view can be assessed from the students themselves. Maintaining a constant vigilance and getting involved is the only way our tax dollars will produce facilities that will reap a rich harvest for many years to come. Therefore, teachers and instructors are the first critics of a new school.

Usually, when instructors and other users of a new facility are heard complaining about certain features of the facility, it is an indication that the program specialist did not carry out his/her role. However, the role of program specialist is quite complex and demanding, but also involves coordination. The following brief breakdown will attempt to familiarize you with the duties. Determining Need - The basic rule in any facility planning is that "program determines facilities, not vice versa." This is determined by subtracting the capacity and variety of present facilities from the facilities necessary to carry out the future program. The inability to either demonstrate this need mathematically and/or to effectively articulate it could quickly put an end to the desired project (Theunissen, 1978).

Learning and Language - Because of close communication with the architect and contractors, it is necessary to become familiar with terms and definitions used in the field. Many times discussions will take place at particular meetings, and if unfamiliar language is being used, some concept may "slip through" that otherwise would have been challenged.

Committees and Meetings - The program specialist must use skill in selecting a planning committee and should be free to call a meeting above and beyond the normal sequence schedule if problems arise. He should be invited to all subcommittee meetings on multi-faceted facilities to deter redundancy.

Check Lists, Equipment, and Follow-Up - One practice that helps to assure a desired facility is the acquisition and periodic checking of comprehensive check lists. Near the end of each project, a "punch list" is prepared to make certain that the finishing details are correct. The contractor is usually eager to finish and these final details may be done in a slipshod manner, if no one keeps checking. The program specialist will also need to be certain that maintenance equipment is included and make a close check with the architect to ascertain which equipment might be included in the construction contract and which must necessarily appear on the equipment list.

The program specialist is the egg in the omelet; he/she holds the whole works together. Total involvement is the order of the day and throughout the project till it is finished. Ideally he/she will be given some released time from normal work-load to carry through this planning and observation work, but this is not usually done. As important as this job is, it appears that no one wants to contribute in the little ways to ease the pressure, yet, they will be the first to criticize if minute details aren't perfect. This format could be helpful in successful implementation of building curriculums or any other course work that involves the manufacture of an item to finished quality.

In past years, architects were frequently contacted to design a school without detailed input by the educators or school board concerning the educational needs. Today educational specifications are required by law or policy in many states. Adequate educational

program planning is the primary purpose for writing educational specifications and must precede any physical layout design.

EDUCATIONAL SPECIFICATIONS

Organized, detailed, descriptive statements and standards related to the instructional program and the environmental and physical characteristics of that program

Written directions to the architect. If the information is accurate and complete he can proceed through the facility design and planning more rapidly and with fewer omissions of inefficient spaces.

Although the literature contains much information on the specifics of laboratory planning, little has been written on the content and organization of educational specifications. Yet only through adequate education by the educators can the architects provide educationally functional and efficient facilities.

The educational specifications for a single subject field, whether a part of planning a totally new school or a new subject addition, must first include the district's and school's basic educational beliefs. The subject planner must correlate his/her program to the school's philosophy, goals, organization, estimated enrollments and scheduling patterns (Steeb, 1976).

The Council of Educational Facility Planners in What Went Wrong? (1968) examined the consequences of poor design, materials, and equipment choices in new educational facilities. Richard Healy in Design for Security (1968), a work concerned with industrial and business security, emphasized that the architect needs guidance from the owner if he is to incorporate adequate security controls and not compromise security features with building design.

The present study was conducted to identify features for lessening vandalism for consideration in the planning of educational facilities. Each of the members of the National Association of School Security Directors as listed in the 1974 Membership Directory of the Association was contacted and asked, "If you were asked to help plan a new school building, what features would you recommend for inclusion to enable it to resist vandalism?" 134 members were included in the study who had originally made contributions. Based on the final ratings 363 features in 24 categories were identified as acceptable for lessening vandalism for consideration in the planning of educational facilities. The following lists include these areas of consideration (Irwin, 1978):

Site Selection	Exterior Walls and Roofs
Fencing and Gates	Windows, Skylights, and Transoms
Vehicular Traffic	Door Openings, Doors, and Hardware
Pedestrian Traffic	Mechanical Equipment Including
Outdoor Play and Athletic Areas	Interior Lighting
Landscaping	Interior Walls and Ceilings
Exterior Lighting	Restrooms, Shower Rooms and Locker
	Rooms

General Building Design and Development	Vaults and Storage Areas
Hallways, Stairwells, and Elevators	Security Quarters
Mechanical and Custodial Rooms	Protection of Fire Fighting Equipment and Fire and Smoke Detection and Alarm Systems
Instructional Areas	
Instructional Equipment and Furnishings	Suggested Participants in School Security Planning
Outdoor Auxiliary Area	
Features of Intrusion and Other Alarm Systems, Except Fires	Miscellaneous

It should be noted that few respondents mentioned that school security was adequately considered in their district. A few large city school districts at the time of this study had developed security design criteria which were provided to architects early in the facility planning process. However, most respondents indicated they had never had this opportunity and a few indicated that their efforts had been rebuffed. From the various comments, one may suspect that in the typical school district, and especially in small and rural districts, any security consideration is left up to the architect.

In conclusion, vandalism could be minimized by employing principals of good design, planning, and construction, instituting preventive maintenance programs, and involving patrons in planning among others (Irwin, 1978).

Until recently most planning of any facilities has been left up to the architect, who we have found to be a specialist, but often times less educated than the people whose ideas he has rejected or unsolicited. The upswing of vandalism has clearly shown the deficiency in past planning. We are now on the threshold of progress as now we see the value of communication of ideas regardless of their source; janitors as well as shop teachers may have valid points that will not be overlooked. Any of Yee With an Idea Come Forth to a Place of Honor (Irwin, 1978).

Today's trends in education will dictate designs of future schools. One clearly identifiable trend is the increasing need for technicians with a "Systems" orientation that cuts squarely across traditional lines of specialization, examples being thermal, optical, or hydraulic systems. A second trend within the educational system, is toward the use of modularized teaching systems with greater flexibility. Technical and vocational education services at the postsecondary level are expected to increase substantially in the next few years. Federal and state support for "postsecondary" education may shift slowly from traditional college and university degree programs that produce more immediate economic and social benefits. In the meantime, while educational priorities are changing slowly, technology and technical manpower requirements are changing rapidly (Roney, 1978).

The implementation of this new style curricula will involve the systems approach combined with subjects that support but are presently a category of their own. Physics is a typical example of

an element for this modern concept that reorganizes basic physics into units that are directly related to technology.

The facilities change that this will bring about will not be as costly as the adaptation of older buildings. The changes will highlight a library of several hundred teaching modules, and provisions for teachers of the technologies and teachers of physics to share office space, classrooms, and laboratories.

It seems that vocational education is chasing an elusive child; once we feel we have caught it, its needs change and we are compelled to assume the chase, changing our strategy on the run (Roney, 1978).

Educators have too long been content to let tradition, architects with standard plans, building contractors, and the local establishment dictate the shape of school spaces (Cote, 1978):

Old Factors		New Factors	
Old Standard Roomed School	1. Cost	1. Students	* Open
	* 2. Tradition	2. Educators	* Space
	* 3. Teacher Control	3. The Future	* Concept
	* 4. Administrator Control	4. Imagination	
	5. Status	5. Planning	

Neither method is ideal, something else is needed. These 5 new factors have an obvious right to be considered in the design of schools. No. 1 suggests design around the reality of youth and children. This would reduce costs by eliminating add-on spaces that relate to adult needs. No. 2 suggests design around the reality of adult responsibility for control of the educational environment. No. 3 - Schools should be designed around the realities of the future rather than the traditions of the past. The child entering school today will live in an adult world whose technology will chiefly be biochemical, electro-chemical, and electronic. No. 4 - The

possibilities are infinite in the design of school space from carrels (1 student) to seminar rooms (10 to 15). No. 5 - Since fewer new schools are needed, the redesign of existing schools becomes the primary emphasis of planning.

In view of the trend to zero population growth, more schools are being closed, demolished, and being used for other purposes. New buildings could conceivably halt while redesigning of present and other facilities goes on strong. Regardless of building trends, education must exhibit credibility thorough creative design and planning to avoid being strangled by the ever tightening public purse strings (Cote, 1978).

It's difficult to notice every new idea in educational facility planning, but here are 10 that must be labeled trends that are significant in the current revolution of the school planning process (Crockarell, 1974):

(1) Open space is being modified. During the past 10 years, open space has not provided the optimum in viewing and learning environments, relief from monotony of surroundings, privacy for individual study, and insulation against noise and visual distractions.

(2) Design/build is becoming the "hot" construction method. Advantages - Architects and engineers are asked to become more accountable before receiving a contract, the risk of escalating costs is transferred to the design/builder, buildings are generally completed in less time, and the physical character of the structure is known before selection of the architect/contractor. The one

potential danger of a design/build school is that low bidders may use materials not up to traditional quality.

(3) Lease-back arrangements are being increasingly considered. Critics of the lease-back concept state that because the district is not the building owner, educational planning will be ignored in facilities design. However, since the building is being erected for a long time tenant, his wishes will have to be taken into consideration.

(4) Schools are searching for alternate "homes". Though not a new idea, more schools have started searching for space in old warehouses, churches, offices, and other unused buildings. If the district cannot afford a new school or extensive renovation, these out-dated facilities are logical choices for housing many educational programs. A related idea is the use of air rights above and under expressways.

Career Centers

(5) Career centers are reflecting creative, nontraditional design. After many years of neglect, the vocational school has once again become an important part of the overall educational offerings.

(6) Environmental considerations are becoming critical. Some ideas include the use of solar heating and energy recycling equipment.

(7) High schools are grouping students into heterogeneous pods. Though this must certainly be categorized as an educational trend, it's a factor that will affect planning of interior spaces in future buildings.

(8) Magnet schools hold the key to education in specific fields. An urban concept, the idea is to create programs so educationally attractive that students from all parts of the city will be drawn to the "magnet" building. Some magnet school centers are added to existing facilities. When this occurs, planners should design the space so that the magnet center can eventually be integrated back into the normal school program if student demand falters.

Community Schools

(9) More buildings are being planned to include community activities. To cut investment costs and still provide comprehensive educational facilities, many districts are sharing facilities with municipal government departments or other educational institutions such as community colleges and vocational training centers.

(10) Alternate schools keep opening. The open and alternative school concept has significant impact for facility planners who plan new schools to accommodate both traditional and flexible programs. It also means that planners will become more involved in renovating old buildings for new uses.

I am in complete agreement on the revamping of old sturdy buildings. A typical example is our college which has quality programs. Education is a product of a teachers expertise and student attitudes. The physical building is of little consequence. Many a scholar has arisen from the one room school.

We no longer have one room schools as today's needs must have large complex facilities. Current costs on rising inflation is a real threat. One place to attack the inflation problem is to make sure that designs of new buildings help prevent future maintenance costs. This can be accomplished through: (1) proper planning; (2) efficient design; (3) choice of proper materials (Day, 1975).

Good planning can best be achieved through adaption rather than our old repetitive process. For example, architects and contractors traditionally decide for us what materials we need in a building. When the structure is completed, the keys are then handed to the maintenance staff and they clean it for 40 years.

Wouldn't it be better if the maintenance staff was actively involved in the planning of the building? If it's not possible to involve them in the entire process, certainly it would be of help to at least solicit their help in such things as selection of materials. By taking this approach several things are accomplished. For one, useful opinions are obtained reflecting local needs and desires. Also and perhaps more important, your maintenance staff will feel as if they have played a part in the decision making process for the new structure. If a person identifies with something he will work harder to see that it functions properly. This will be an important first step in attaining efficient, productive care of a new building (Day, 1975).

Another element of planning is inservice training. Today there is a great need for inservice training for maintenance

staffs. We cannot plan for maintenance as we did in the past. We no longer have the same kind of facilities or the same kind of economy. (Day, 1975).

As far as grounds are concerned, there is a great deal of difference between the site of today and the cinder yard of yesterday. Site planning today means taking into consideration every function of the grounds, then integrating them into one overall smooth working facility that will be economical to maintain.

Tips for Easy Site Maintenance

Easily Accessible Site - to prevent construction of elaborate roadways and walks.

Avoid Highly-Exposed Sites - a protected site will require less care in terms of plants, snow removal, etc.

Flat Sites or easy sloping sites are more problem free.

Check Soil - for promotion of grass growth without excessive watering.

After the site is selected it is important to integrate all the elements involved.

School Building - should be located on the site to provide for low maintenance and slopes should provide for good drainage.

Parking Areas - should be overbuilt so that lawns never need to be used for parking and should be close to the periphery to allow for short roads.

Entrance Roads - should be wide enough for maintenance vehicles and should have adequate temporary storage for refuse containers to reduce clean-up maintenance.

Pedestrian Walks - Should be built where the students make pathways and wide and strong enough for emergency vehicle traffic.

Compact Buildings - reduce the amount of walking necessary to get to different parts of the building, insuring that less time is spent on marginal activities.

Few Windows - Less breakage and vandalism, decreased cleaning area, less heat loss.

Systems Construction - uses of uniform materials enables the maintenance department to maintain fewer supply stocks and types.

Common Service Shafts - that contain various mechanical systems allow for easy centralized repair and operation. Custodial supplies should be in a centralized location and particular needs in other special locations.

Custodial Rooms - private locker and shower space should be provided. Custodial closets should have 8" tile curbing and floor drain. Hot and cold water, electric outlets not more than 75' apart.

Exterior Surface - no exterior surface can escape the dreaded spary can! However, consider these points:

Paving - never use asphalt on a grade of over 10% as it is impossible to get proper compaction, resulting in crumbling and short life.

Curbs - use granite as it is almost indestructable - snowplows and age do not effect it.

Exterior steps - use ramps wherever possible. On steps use stone and a non-skid surface. Use anodized aluminum handrails.

Roofs - So far pitch and gravel are still as good as most.

Exterior Walls - The local climate conditions, usage, and expectations must be considered. Ease of spray can grafetti removal.

Interior Surfaces - Stairways are not a suitable place for soft floor coverings. Use a hard compound stairway that has a smooth continuous surface so that it can be easily swept and mopped.

Ceilings - Acoustical tile is still best.

Walls - Vinyl coverings are very good for easy maintenance. Concrete blocks with epoxy paint are easy to clean. The key is to have something that is attractive and does not require painting.

Lights and Furniture - Should be smooth to avoid being a dust collector and ease of cleaning.

Research has indicated, if other aspects of the maintenance and operation program at a school are conducted properly, a 20% cut in cleaning staff is often possible when a building is designed to prevent accumulation of dirt (Day, 1975).

I am pleased to find that someone got credit for an idea I expressed in the late 60s about just growing grass on a new campus and putting in the sidewalks after the students made their beaten paths. In Oswego, it was from the Union directly to the library door and from the corner of the library to the parking lot. Of course, who would listen to me being a new student. How many excellent ideas died because of being rebuffed because their source wasn't accredited. It's good that new trends want to hear from the custodian and others that have a lot to contribute. Taxpayers no longer want to support that "Ivory Tower Philosophy".

New designs in schools are helping to reduce resistance in voters to approve new funding. One districts new image for a vocational school has excellent ideas.

Informal Design - Since vocational programs by their nature require long lab periods which tend to isolate students from those in other courses, the school is designed to promote informal contacts. All student movement is focused on a central traffic ramp which encourages mingling of students and staff. Isolation barriers are also broken by grouping related courses previously taught in different rooms together in the same classroom so that students from different courses are brought into association.

Glass Walls - Classes with specialized activities are exposed through glass walls making display cases of work areas. These extensively-used glass walls are saying, in effect, that what is going on is too important and interesting to be hidden behind standard walls (Davies, 1973).

The design philosophy was strongly influenced by the very evident pride the community (Lincoln, Rhode Island) took in the school and type of education it was to offer. Instead of concealing exhaust systems, heating ducts, and plumbing, they became focal points to promote student and community understanding and appreciation of the technical education the school was providing.

In 1973 the trend for tighter school budgets had a lesser effect, but nevertheless was evident. Although this facility was newly built, it incorporated sharing of facilities with a community college. The design saved costs by ease of construction and elimination of part time use (Davies, 1973).

The idea of tempered glass walls in shops promotes interest in vocational education, especially for the females who traditionally have been excluded from technical trades education. The "showcase effect" can only help vocational education and improve the work ethic in the community (Davies, 1973).

Lets now move into the classroom or shop itself. The time to specify needed facilities for a course of study is after specific goals, behavioral objectives and units, methods and evaluation methods have been planned. At this point, minimum and essential facilities for an optimum educational experience can be identified.

Specific programs or learning expressions dictate needed equipment and machines including the rational used in procurement. Examples: a comprehensive high school will have multipurpose laboratories. This means that all subjects taught must be searched for items in common to avoid duplication. Another shred-out is Vocational or Avocational; for a vocational shop in buying eight latches, you would buy four different makes to allow the student with familiarity of more styles found in industry. But for avocational purposes, purchase all the equipment locally that is easy to service and for prompt dealer service (Silvius & Bohn, 1976).

Work Stations - a place where a student may work or headquarters for al period of time while he researches, plans and conducts a project, carries out some experiment or unit of work. Depending on the goals or organization of the course, a lathe could be a work station or a service machine. The number of needed work stations depends on the

optimum number of students to be scheduled at any one period and the orgnaizational plan of the laboratory. The formula for INDIVIDUAL PROGRESSION is $\text{No. of Students} \times 1.20 = \text{Work Stations}$.

When ordering equipment and supplies use the policies of your school district. New teachers may have to plan a program delimited to the equipment and instructional supplies now available. We have all been in this position at some time. Mobile Labs -- New York City, New Jersey, Colorado, and Arizona have used these with varying degrees of success. At this point I find this information very logical and informative for setting rules of thumb.

Among priorities in planning and equipping a shop is the allocation of funds. After deciding how much to spend on machines, the question remains of how many and what type of lathes, mills, and grinders to purchase. What new aspects of machine technology should be incorporated in the new facility. Potential growth and expansion must be considered plus OSHA requirements must be remembered and employed. In planning, a scale model can be utilized by the instructor, industrial coordinator, and the builder to rearrange walls, doors, and storage areas to achieve the most efficient final design possible. The sharing of the tool room and classroom with a refrigeration class proved to work out well. Overhead bars allowed a smooth floor for later adjustments of machines for special duration jobs (Silvius & Bohn, 1976).

In the East Los Angeles Occupational Center, the "open-entry, open-exit" approach to training has been used successfully. It

allows an individual oriented approach to learning and allows the student to start at any point in the year.

This concept is flexible enough to allow full enrollment most of the time. A new candidate can attend until he has the skill level he needs for his present employment or for his own goals however private. Inquiries to machine shop operators help create the guidelines in the curriculum. It is good to see some cooperation between school and the labor market. One repeated response to the inquiries stressed the importance of a good attitude in developing a valuable employee. It seems that the good, positive attitude which has always been an important requirement for success is increasingly harder to find. Many employers feel that highly refined skills in young workers may be secondary to a penchant for hard work and a willingness to cooperate (Silvius & Bohn, 1976).

In summary, we have reviewed the complex procedures involved in planning a school facility; the roles of the persons that make up an ideal planning committee, and some of the common pitfalls. Careful details must be adhered to for a successful project. Modern buildings must incorporate designs for easy change, multiusage, easy maintenance, and to deter or eliminate vandalism. Everyone must contribute their expertise from the Chairman of the School Board to the student in the collection of data to design the ultimate educational facility. From the Planning Committee ideas to furnishing the individual shops, each member has his part. We cannot under-emphasize the importance of the teacher who ultimately produces the important end product--a graduate student equipped to go out, carry himself, and be a contributor to our society.

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Career Education and Curriculum Development

By John F. Caruana

Just as nations, people and society have roots so do educational movements. They do not occur in a vacuum nor come from the mind of some person with extraordinary powers. They tend to come from and encompass earlier ideas, experiments, and movements which at a previous historical movement were directed at problems or issues so fundamental on our society that they tend to recur. So it is with career education. Herr (1977) states that career education is a movement with a past. In its current form, it blends into a new and systematic configuration, but it encompasses many concepts and practices long apparent on the American educational landscape.

Hoyt (1975) lists the 15 most common questions asked of the Office of Career Education about career education: (1) what is career education; (2) how does career education differ from vocational education; (3) was career education necessary; (4) what are the characteristics of a good career education program; (5) should career education be taught as a separate subject; (6) is career education necessary at the elementary level; (7) is career education just an approach to a good teaching technique; (8) what about the arts and humanities in career education; (9) how can teachers get career education started in their schools; (10) is career education just another educational fad; (11) is career education growing; (12) where will the monies come from for career education; (13) will the classroom teacher need in-service training; (14) what about preservice education; and (15) how do students, teachers

and the public react to career education? These questions set the foundation for the discussion of career education.

Goldhammer and Taylor (1972) initially set career education's beginning in January 1971 when the U. S. Commissioner of Education, Sidney P. Marland, Jr. issued his call for "Career Education Now" to the National Association of Secondary School Principals in Houston, Texas. This call for career education by Commissioner Marland was not another educational fad. It has been called for by parents, students, and the general public.

Why was this call for career education made? Jesser (1978) lists four reasons: (1) students were leaving high school unable to read; (2) teachers were more concerned with economic issues at the time; (3) more money was being spent for education when the student population was decreasing; and (4) students were restless, undisciplined and rebellious.

Herr (1977) states that career education at its birth was vaguely stated in its form and substance even though many of the events - economic, educational, occupational, legislative - dominated the 1960's made an educational response such as career education virtually inevitable. Jesser (1978) writes that Commissioner Marland purposely did not define the concept because he strongly felt to do so would be the best way to kill the whole idea.

While Commissioner Marland was not asking for definitions, he was making clear what career education was not. Career Education is not: (1) a renaming of vocational-technical education; (2) an anti-intellectual conspiracy; (3) a way to discourage poor and minority young people from

going to college; (4) limited to elementary and secondary schools; (5) simply a means of getting a job (Jesser 1978).

Herr (1977) states that it was not until 1974 that definitions were attached to career education. The Office of Education officially adopted a comprehensive policy statement on career education, which included as its definition: "Career Education is the totality of experiences through which one learns about and prepares to engage in work as part of his/her way of living." The Council of Chief School Officers has defined career education more specifically- "an instructional strategy aimed at improving educational outcomes by relating teaching and learning activities to the concept of career development. Career Education extends the academic world to the world of work. In scope, career education encompasses educational experiences beginning with early childhood and continuing through the individual's productive life. A complete program of career education includes an awareness of self and the world of work, broad orientation to occupations, in-depth exploration selected clusters, career preparation, an understanding of the economic system of which jobs are a part and placement of all students."

Hoyt (1975) defines career education as all activities and experiences through which individuals prepare themselves for and engage in work - paid or unpaid - during their lives.

Immediately prior to the adoption of the U. S. Office of Education definition and policy statement, the Education Amendments of 1974 (Section 406, PL 93-380) made career education a law of the land.

Education has been involved in career education even before legislation came into being. Career Education has been effected mostly

by the Vocational Educational Acts of 1963 and the 1968 Vocational Education Act Amendments.

Federal legislation has created the Office of Career Education within the U. S. Office of Education and authorized the appropriation of federal dollars for the support of career education efforts. The role of the federal government in career education has been directed primarily toward the gathering and disseminating of useful material, and the demonstration of worthwhile programs or efforts (Jesser 1978).

In 1977 the Career Education Incentive Act was passed. This act authorized \$400 million over a five year period for the purpose of articulating academic learning with occupational development at all educational levels. While the act gives primary attention to the elementary and secondary schools, it also provides \$75 million over a five year period for higher education (Marland 1978).

Much has been written about career education, and to educators the term has many connotations. Because of the broad interpretation of career education many educational institutions have enacted their concept of career education.

Baratz (1977) believes that all students should be educated in the liberal arts discipline because it gives a student a well-rounded education and does prepare him/her for his/her life's course of work. "The only valid form of career education is one in the liberal arts." It is agreed that too many liberal arts students leave colleges and universities without acquiring experiences, real or simulated, in the application of all the skills.

Robbins (1977) states that there is room for both disciplines in

education. The liberal arts and career education can be complementary to one another. He believes we as educators should not lead students in the direction of either discipline. We should, instead, instill freedom and make available options. This idea can be summed up by a quote from John Gardner - "Our society needs both philosophers and plumbers and our institutions must be devoted to the idea of producing excellence in every area for which they have responsibility."

After eight years of career education in operation, Sidney P. Marland speaks out on liberal education and career education.

Marland (1978) states that if liberal arts are in decline, their place at the center of learning must be restored and safe guarded. If the concept of work has mistakenly been perceived as antithetical to the health of liberal education, the concept must be righted. He also believes that schools and colleges cannot take on the burden of solving national unemployment problems. They can, however, equip young people to ready themselves for the working world in many ways. Work is not, and must not be antithetical to the liberal arts. This is where career education - not a program nor a curriculum, but a way of thinking and behaving - finds its application.

After much has been said and written about career education in the last eight years, where does the concept of career education go from here? No one, even Commissioner Marland will predict the future of career education. Jesser (1978) does state that certain problems will have to be taken care of, the public has to be informed of the good and of the progress of career education, and that some accountability of career education will have to be given in order for career education to be refunded and continued.

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Chapter 12

Co-operative Education

By Eugene M. Terenzetti

In justifying any educational program, the primary concern is that the students receive a valid and contemporary outlook of the field of study. In vocational education, where the emphasis is on training for the world of work, we must be sure that these goals are always justified. One such program where this is easily accomplished is co-operative education. In this program, the educational experience is coupled with actual work experience to provide a more rounded training.

Evans (1971) states that the most important aspect of co-op education is that it keeps vocational training abreast with what is actually going on in the industries for which the students are being trained. As often happens, the cost factor of keeping vocational programs in the vocational center updated prohibits educators from training for the actual careers that do exist. In industry, the newest and most accurate equipment is available and the student can benefit greatly from this experience.

Another advantage of co-op training as stated by Spetts (1975) is that it removes students from the unstable school environment and places them in the more serious environment of the industry. It is in this way that we are able to help the more disillusioned students to prepare themselves for the world of work. The employment rate for students enrolled in co-operative programs exceeds 80% as reported by Evans (1971). Many co-op programs have been instituted as a means of lowering the drop-out rate in schools and also providing a means to economically helping the dis-advantaged.

Evans (1971) also notes that the co-op program lends itself to individualized instruction. Students working in the program are in direct contact with their co-ordinators and with those participating from the industry. Spotts (1975) also adds that the discipline problems are minimal as a result of the individualized training. He notes that students are usually selected because of their past problems in the home school.

The key to having a successful co-op program is to have a strong tie between the home school and the employment center in industry. This link is made by the co-op co-ordinator. Wolf (1978) states that no program in vocational education demands greater commitment from its teachers than the work experience program. Some of the responsibilities he lists include finding potential employers, students, getting clearance for regulations and worker unions, as well as being a counselor for all of the students involved in the program. He also must gear the classroom curriculum to closely follow the patterns of the employment that the students are obtaining. He must also build the program during its formative years and establish the ties between the vocational institution and the employer.

Another aspect of the program that the co-ordinator must be responsible for is the formulation of the work experience plan for each individual student. Co-op training plans, as stated by Elias and Niederkorn (1978) make the difference between training that takes place accidentally and that which is specifically mapped out in the program. These are not only developed by the co-ordinator but are done with the aid of the prospective employer before the student begins the co-op program. Through this, the experiences

encountered will be valid and the student will know what is expected of him. The employer, on the other hand, will also be aware of what the program is designed to include so that the student will receive the proper training. Plans are developed for each student involved in the program with each of their employers. In this way, the program reflects the needs of both the student and the employer. It must be noted that the employer must realize the duty that is being placed on their shoulders and that the student is not merely another employee.

Training plans are also a useful tool for the evaluation of the student as well as the program according to Ellias and Niederkorn (1978). In determining what specific competencies the student will be exposed to, he can be evaluated in a more precise manner. Also, by looking at the training plan, the co-ordinator can determine whether or not the program is valid and contemporary. Training plans may be re-used for following students in the same area with the same employer, but it is recommended that they be updated with each successive experience.

It has been discussed how the program can benefit the student as well as the employer as far as training for the world of work is concerned, but there are other results that are achieved. Cook (1975) notes that there are definite advantages and disadvantages to having a paying work experience or a nonpay experience. Students enrolled in the co-op program who receive pay for their participation may begin to look at the experience as a part time job instead of an educational training experience. In this way we must protect ourselves from offering simply employment in industry. The nonpay experience also has its drawbacks in that it can easily

be used by the employer to gain a source of free labor. Again we must use the training plan to emphasize the specific training that is to be accomplished. There are obviously advantages to both types of experiences. The student enrolled in the pay experience is rewarded not only in the training that he receives but also in the form of a pay check. For many students, the supplemental income may greatly benefit them. Spotts (1975) noted that in dealing with the potential dropout the lure of being paid was enough to get participation. Also in many cases those from disadvantaged families are not able to continue schooling as they must contribute to the family's income. Again, another problem arises in that finding employers who are willing to pay those involved in the program may be difficult. In this case, the nonpay program can be beneficial as it would allow smaller companies to contribute to the program with no financial loss.

The most important part of any co-operative program is that a needs assessment must be conducted so that the students are being trained for occupations that have a need for trained employees. Lynch and Nelson (1978) in conducting their needs survey found that there should be an increased need for persons trained in distributive education. This program lends itself well to co-operative education as there are usually more opportunities for work experience in this area than in industry. Also as noted by Mayo (1976) it also lends itself well in smaller communities where there is a lack of industry but a surplus of stores and retail establishments. The program noted here is in a rural section and is largely a nonpay program. The students are enrolled in the home school for two hours and are at the work experience center

for three hours. The classroom training that they receive supplements the training that they receive in the work experience. Again we must note that the co-ordinator serves as the link between the school and the work experience center. Maye (1976) also notes that there are some special problems in running a co-op program in a small community that are not as pressing in a larger center. There are not as many businesses to choose from in the smaller community and as a result, the training received is sometimes not exactly what the student had had in mind. Also, if a co-operating employer decides to hire one of the students that he had helped train, he will probably be reluctant to take on any new trainees. In the larger centers, this is not as pertinent as the selection of co-operating employers is far greater.

Ward (1976) notes that co-operative programs are not solely intended for high school training programs. There are also many valid programs on the postsecondary level. Many junior colleges are offering programs where the work experience is incorporated. He also mentions that there are an increasing number of programs being offered through correctional institutions.

Another aspect of co-operative training in the grouping of the technical training program in the vocational centers with the existing programs offered by industry for the training of their own employee. Drawbaugh (1977) points out that the intent of these programs is to serve the firm or business by upgrading the human resources available to it. The thought here is to encourage the prospective employer to look to the vocational schools for potential trainees. In most cases, the employer looks to his own employees for potential trainees. In order to become one of his employees, the student must be familiar with the processes employed

by the industry. If the employer would allow the vocational center to participate in this program, then there would be a supply of qualified individuals for employment by the industry.

Another aspect of co-operative education that we must consider is that it serves as an employment agency for the youth involved in it. Richmond (1978) points that co-operative education and the CETA program can accomplish the same goals if the emphasis were placed in the proper area. Youth unemployment is an evergrowing concern. If more co-operative programs were developed to serve as an outlet for the young unskilled labor market, the the problem of an overabundance of unskilled labor would be lessened. The training portion of the Comprehensive Employment and Training Act is where co-operative education should put its emphasis.

SAMPLE PROGRAM

This section deals with a sample of a co-operative program as developed in the health occupations field. It was a pilot project developed by Purdy (1975) and was a two year program. The primary aim of the program is to provide training towards employment in the health careers. The program could also lead to more advanced study at the post-secondary level.

The first year of the program concentrated on the development of a vast background in the health careers. Time was divided between classroom instruction and clinical experience where the students could apply the material acquired in the classroom. areas covered included orientation to the school and health occupations, introduction to aspects of health and human development, growth and development of the person, introduction to legal aspects, body structures and functions, skills related to health occupations, and nutrition. Upon completion of these areas, the students moved

to the second phase of the program which was a co-operative activity between the training institution and an actual health care facility. The bulk of this year is spent in actual work experience although three hours per week is spent back in the classroom. Upon completion of the program, students receive a certificate of completion. The entire program consists of 50 students per year with two co-ordinators. The number of students actually involved in the work experience usually remains at 30.

As a whole, co-operative education is designed to give the student the most valid training that is possible, that is, in the actual job that the student is training for. Many aspects must be considered before a student is allowed to enter a co-operative program: whether he has made the decision of what career to pursue, whether he is willing to dedicate himself to the program, whether he is ready to enter the world of work, and whether he is responsible enough to represent the center in the industry who accepts him into the program. On a whole, the entire program must be held accountable throughout its duration as it is in the constant eye of school, industry and community.

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Chapter 13

Comprehensive High School Curriculum and Adult Vocational Education Curriculum

By Vincent A. Salerno

During the high school years, nearly all young persons have left the fantasy stage of development and are in the tentative substage of the exploration stage of vocational development and are concerned with the vocational developmental task of crystallization. Crystallization of a vocational preference is a developmental task typically encountered during the fourteen to eighteen-year-old period. During this developmental task the teen-ager is expected to begin to formulate ideas as to fields and levels of work that are appropriate for him. He is also expected to formulate concepts about self and occupation that will enable him to commit himself to a type of education or training that will lead him to some partially specified occupations.

From this type of vocational development base, three generalized objectives for vocational education in the high school emerge (Thompson, 1973).

1. Assist the individual in assessing himself.
2. Assist the individual in formulating a tentative occupational choice.
3. Provide occupational experience that enables the individual to explore an area of tentative choice.

Psychological Curriculum Considerations

A review of the psychologies of learning and of adolescence shows that the secondary school curriculum must be flexible in

order to cope with the many differences in students. It must be rigorous enough to challenge the most capable, but still not so difficult as to discourage the less able. In it each student should find opportunities to capitalize on his capabilities, whatever they may be. Even in the mass education of our great comprehensive high schools, we must somehow find a way to design the curriculum for individuals and for the nature and needs of society.

Not only should the curriculum be designed for individuals, it should also be designed to free individual minds. Rather than to attempt to teach all virtue and all knowledge to each student in every course, the curriculum must be selective so that students may be free to "dig deep." To insure the benefits of transfer the curriculum should emphasize methods, structure, principles, and generalizations, as well as usable content. Students should be given ample opportunity to solve problems, to investigate independently, to think originally, and in other ways to learn the skills of the self-reliant, careful, critical thinker. In the long run, to achieve this purpose, the method of learning is probably more important than the content learned.

Whether academic or nonacademic, the content of the curriculum needs to be meaningful to the students and valuable to them both now and in the future. The fact that boys and girls learn most readily those things that have immediate value does not rule out teaching those things that have deferred value.

Everyone acts in relation to long-range goals as well as immediate ones. But whatever the goals, the curriculum should follow an orderly sequence increasing in difficulty and complexity as the student becomes ready.

Who Shall Be Involved

A broad interpretation of the Vocational Education Act with the 1968 amendments would say that vocational education is a must for all people, but discussion here will be concerned mainly with the secondary school phases of the programs. Vocational preparation, a basic objective of terminal or continuing secondary education, has been associated with the middle and lower ability pupils who have pursued courses in vocational agriculture, vocational home economics, distributive education, trades and industry shop classes, and business education.

Unfortunately, vocational education classes have had students who lack either mental or manual skills to successfully participate in such courses. This has been a twofold detriment to vocational education. These students have caused the experiences of the more capable students to be ineffective and the chances of these low ability students of getting and holding demanding jobs have been almost nil.

Sights must be raised and service broadened if vocational education is going to fulfill the promises of a golden era. Vocational education must include opportunities for students of all levels of intelligence, capability, and aptitude, and must retain flexibility for rapid change.

Evans (1971) states a totally new approach to vocational education will concern the top-level student. An effort must be made to capture the number of capable students who heretofore have left school without completing any useful program. This group includes many who have the ability to enter the highly technical fields but have deferred professional objectives. The secondary schools can provide sophisticated, challenging programs that will prepare these students for technical institutes or junior colleges.

In clusion of the entire range of secondary youth in the scope of vocational education may help solve problems of drop-outs, unemployment, and other social and economic ills. The greatest detriment to success will be failure of the programs to keep pace iwth new scientific and technological developments.

Vocational Versus General Education

Curriculum planners must bridge the dichotomy between vocational education and general education to determine the extent of the vocational education program. General education extremists would practically eliminate any formalized vocational training for secondary school youth (some would also omit it from the baccalaureate program), contending that the best vocational education is a good general education (Clark, 1972).

Those who oppose the establishment of strong vocational education programs in the school raise the question of what kind of vocational education really makes sense. They hold that automation will render today's skills useless in the industrial complex of tomorrow. A common prediction is that job skills will change three times in the life of every worker. Industrial

leaders are quoted as urging the schools to leave the learning of technical skills to on-the-job training and to produce pupils well-grounded in the humanities and commercial skills--persons with general intellectual alertness, ability to read and solve problems, and ability to communicate and get along with other people (Roberts, 1965). Studies show that the greatest number of workers lose their jobs in industry through their inability to get along with people rather than their inability to do the work (Roberts, 1965).

The advocates of general education urge curriculum planners to guard general education carefully and keep vocational education as small as possible. They suggest that the purpose of the secondary school is to prepare youth for the fullness of living and that the preparation for vocational proficiency should be left to other institutions and agencies. Naturally, advocates of vocational education do not share this viewpoint, but they must tolerate it so that they can gradually change it and encourage educators to provide for general and liberal concepts in their vocational programs.

School Organization For Vocational Education

The Vocational Education Act encourages the establishment of area vocational schools, and the strongest advocates of vocational education believe the special vocational school is the only answer. On the other hand, there is a strong contingent of educational leaders who are dedicated to what Conant called the "really distinctive American school"--the comprehensive secondary school. In this school, vocational education is an integrated part of a comprehensive school program. The choice of school organization is a perplexing problem for curriculum

planners, and it demands a careful weighing of evidence before decisions can be made.

A separate vocational school is expensive to build and expensive to operate, but the advocates of such schools are sure the cost can be justified and the programs can be made really effective. They hold that a certain amount of comprehensiveness can be maintained in a special vocational school. Vocational Administrators point to the large number of these schools in Pennsylvania, Ohio, New Jersey, and New York where the quality programs of the past decades have originated. The status of the large city schools may influence the thinking of those who do want to break with the past (Roberts, 1965).

One of the most telling arguments for the separate vocational school comes out of an evaluation of the social status of its students. It is the contention of vocational school leaders that where vocational education is part of a comprehensive school it receives little respect (Evans, 1971). Operating funds are not adequate and there is a glaring lack of administrative and supervisory attention. In too many instances, vocational education facilities are housed in Quonset huts, abandoned storerooms, basements, or isolated wings of the regular school building, and opportunities for participation in the total educational and social program of the school are curtailed. Therefore, an undesirable status attitude is developed toward vocational students. If the students are already suffering from economic, social, and educational impoverishment, the situation becomes intolerable. Vocational people do not deny

the comprehensive values of the school, but they strongly condemn a situation that makes second class citizens out of students. A comprehensive program should not come at the expense of a student's self-respect and his status among his peers.

Whether the new vocational schools, such as the area schools, can acquire a desirable status remains to be seen, but there are many factors in their favor. Many of the students will be receiving a technical education that will be far more sophisticated than former programs, and the school population will have a better balance of student ability and achievement. Vocational leaders believe that comprehensiveness can be achieved in a vocational program without merging it with the academic school program. They think such programs should augment and complement each other. The vocational secondary school program should be so organized as to provide a complete range of opportunities for all students to explore and experiment with the different clusters of occupations.

The National Association of Secondary School Principals is on record as favoring the comprehensive high school (Dugger, 1965). According to the NASSP, this type of secondary school provides opportunity for students from various socioeconomic groups, and with different aptitudes and levels of ability, to live and work together. The publications of the Association's Curriculum Committee (1961) describe the comprehensive school as one that offers the best structure and content for fulfilling the American ideal of adequate educational opportunities for all youth.

Adverse criticism of separate vocational schools can be summarized under the headings of articulation problems, rigidity of curriculum, and unfavorable social relations (Somers, 1971). It is claimed that where vocational schools exist, a youth is forced to commit himself too early. Opportunities for vocational choice should go much beyond fourteen or fifteen years of age, yet once a pupil has been in a vocational program for a period of time, spending at least half of his time in the shop, he finds it difficult to change his course. If he returns to his home school, he is retarded academically. It is equally difficult for an older pupil to make a late commitment to a vocational school. He has to begin almost from scratch in his shop work and his academic work is not always applicable. These conditions could exist in a comprehensive school, but the proponents claim it is far less likely.

Vocational Technical Schools

The demand for unskill hands is rapidly diminishing. The complexity of modern jobs calls for greater sophistication of preparation. Service occupations such as health, law enforcement, fire protection, sanitation, pollution control, and education are adding technical classifications constantly. Business occupations in data processing, distribution, transportation, finance, and management are also developing technical categories. The production and manufacturing occupations continue to be centers of automation where only those with technical skills have any chance of survival. The program of the secondary school will continue to furnish terminal preparation for limit-

ed skills positions, but a technical school's program will be needed for these more complicated occupations.

The term, "technical school" has many connotations. As used here, it refers to a school which trains youth to be highly skilled artisans and technicians--a community college, a junior college, or a comprehensive secondary school expanded to include the thirteenth and fourteenth years (Somers, 1971). It is both unfeasible and impractical to provide such training in the usual span of the secondary school years.

Curriculum planners must pay increased attention to articulation, so that pupils in the comprehensive schools will be prepared to continue their training in a technical school. Preparation should be adequate for both the terminal student in the technical school and the student who plans to continue on toward the baccalaureate degree. This means an added dimension for vocational education at the secondary school level. Spiraling job requirements and the increasing need for breadth of preparation will cause curriculum patterns to be pointed toward post high school matriculation. This ought to raise the status of vocational education, since most of the pupils will be "pre-college," or at least "pre-junior college."

The Need For Continuous Education

The need for continuous education is closely allied with employment problems. Technological developments have greatly reduced the number of jobs available to people with limited marketable skills and have made it necessary to retrain people for new jobs.

Other problems are perhaps as important as those of employment. Today, citizens must have the ability to make complex decisions; yet eleven million adults are functional illiterates, and too many voters base their decisions on scanty information, prejudiced opinions, and hope for personal favors. Lack of social skills results in tension between peoples of different race, color and religion. Mounting divorce and crime rates emphasize the problems of unsatisfactory social adjustment. Extended life expectancy and the declining number of necessary work hours greatly extend the amount of leisure time available, but too often the new leisure is more frustrating than rewarding.

The potential enrollment for adult education far exceeds the enrollment possibilities of either elementary or secondary education. This makes it one of the most significant educational movements on the American scene (Smith, 1970).

Development Of Adult Education

Adult education has developed through a variety of patterns and organizations. In the early stages it was entirely vocational education through trade schools. An extensive network of public and private correspondence schools developed later, and colleges and universities began to include a variety of extension courses. World War II marked the entrance of the military into the adult education field in a formal and well-organized fashion. Today, part of the military budget is still devoted to the continuous education of service personnel.

Community colleges and vocational schools are the latest developments on statewide scales. Oregon, among other states,

offers financial assistance to communities willing to develop schools for continuing education. In Florida, a series of junior colleges have been well established. In addition to the basic two years of college, they provide extensive vocational and technical programs which are terminal. Plans are well under way for a program of continuous education from kindergarten through graduate school at one location (Knowles, 1971).

A series of events have marked the development of the national structure of adult education. The Smith-Hughes Act of 1917 furnished federal funds for extensive vocational agriculture programs--evening classes or other continuing education activities--for adult farmers. Adjustments and extensions of these programs were made by the George-Dean Act of 1936 and the George-Barden Act of 1946.

Latest impetus to the vocational aspects of adult education was furnished by the Vocational Education Act of 1963, which developed out of the growing awareness that vocational education is a tool for the social and economic improvement of underprivileged people. The scope of this act was greatly enlarged by amendments added in 1968.

The first professional recognition of the status of adult education came in 1924, when the National Education Association established the Department of Adult Education. The formation of the Association for Adult Education and the National Home State Council followed in 1926.

The federal government entered the adult education field in a formal way in 1933, when it developed the Federal Emergency Program to provide training for victims of the Great Depression. This involved such programs as the Civilian Conservation Corps, which trained young adults for forest conservation activities. Another federal government activity was the creation of the Armed Forces Institute in 1942. Since its conception, this program has provided for the continued education of thousands of young men and women in the armed forces. Today, part of the military budget is still devoted to the continuous education of service personnel.

The Adult Education Association, formed in 1951, has conceived many of the national programs and plans for adult education. The Fund for Adult Education, which plans and supervises programs, was established the same year. Thus it may be seen that adult education has had much more federal backing than any other form of education. However, good programs of adult education must be state and locally oriented.

In spite of the fact that most of the traceable developments of adult education is largely within the framework of educational institutions, curriculum planners must be aware of the fact that a number of adult education programs are outside this framework. They may be sponsored by museums, libraries, industrial organizations, labor unions, professional societies, military establishments, hospitals, religious organizations, trade associations, state and local governments, prisons, and

a host of political, charitable, social, civic, ethnic, and other community organizations (Fuller, 1971).

Public School Involvement

The structure for adult learning is formed in the elementary and secondary schools, and the basic and preparatory training of the regular school program must be articulated to the continuing needs of adult learners. Part of the secondary school curriculum is geared to adult education in the formal school period, and adults may continue to take courses in the post-school years. This is true particularly of the subjects with vocational training aspects, such as vocational agriculture, vocational home economics, and distributive education. Formal classes are conducted within the school, and regular school personnel engage in the follow-up activity in the homes, on the farms, and in the communities. Late afternoon and evening classes, allied but not directly associated with the regular school program, are part of the curriculum of many comprehensive secondary schools. Their counterpart may be found in the regular schedule of vocational and technical schools.

Available research indicates that public schools are the major agency for promoting adult education, and the evening school is the main organizational pattern. Evening school enrollments have steadily increased since 1955, and there has been a gradual increase of academic subjects and a decline in vocational subjects. There is little uniformity of curriculum structure, since the needs of students vary greatly (Kidd, 1970).

Little progress has been made in preparing teachers for adult education. The usual procedure is to recruit from the regular day school program. Often, however, these teachers do not adapt themselves well to evening school teaching, even though it offers greater financial remuneration.

Adult Education Objectives

The local curriculum planner must make decisions on vocational stress, terminal emphasis, academic continuation, or preparation for leisure-time pursuits, since immediate objectives for these programs will vary from community to community. Venn (1970) states there are, at least, three broad general objectives that ought to underlie all programs of adult education. The first is enrichment of community living and improvement of the social order. Many adult education activities are in themselves community enrichment. This is particularly true of certain social and cultural ventures such as the creation of art galleries, the development of symphony orchestras, and the organization of various cultural study groups. If adult education is to be community centered and financially supported, this objective is realistic.

A second objective that ought to be inherent in well-planned adult education programs is the fostering of respect for human dignity and personality. This objective involves an all human dignity and personality. This objective involves an all-out effort to reduce race tensions and criminal activities and to improve community living conditions everywhere.

A third objective concerns the improvement of the citizen's ability to make the intelligent decisions required by the complexities of modern society. This objective is vital in a democratic society.

These objectives, natural extensions of secondary school objectives, attain fruition in education. Their refinement, improvement, and application are part of the opportunities of adult education.

Instructional Action Pointers

In the operation of adult education programs certain action pointers should be observed. Whether the program is sponsored and operated by a school system or by another community agency, community participation is greatly enhanced by voluntary leadership and association with governmental agencies. In the case of a school-sponsored program, voluntary involvement would be in the area of advisory councils and student leadership activities.

Teachers for evening programs must have patience, skill, and understanding, and they must plan their instruction carefully. Since attendance is not compulsory, students drop out of programs quickly if they do not like the teaching procedures. They resent being "talked down to" as much as they dislike vocabularies which are over their heads. Techniques that will work in other classroom programs are often unsuccessful with adult students. Extensive lecturing, for example, may result in a decline of interest. The program must

offer them freedom of choice and freedom in learning development. Above all, its values must be apparent and practical. Student involvement in problem solving is one of the soundest teaching procedures. This means the teacher consults with the student to help identify problems, helps gather data for solutions, furnishes the technical advice needed for formation of hypotheses, and gives the student ample latitude to reach successful solutions. To a certain degree, the whole realm of adult education should be geared to upgrading intelligent decision-making ability. Decisions in the voting booth, the market place, the public forum, and the family circle require greater acumen than ever before. Good citizenship requires ready ability to analyze an issue, study the facts involved, and come to a clear, valid, and unbiased conclusion. Too frequently the average adult is unaware of the necessity or even the desirability of making a decision.

Adult education programs should help mature people do the intelligent thinking so necessary for solving the ever-increasing political, economic, and social problems. Here again, actual experience is important. Descriptions of the processes and techniques of decision making must be supplemented by realistic experiences.

It is not feasible to analyze the dropout problem here, but it is important to raise the question of whether the term "dropout" is accurate or deserves the stigma frequently attached to it.

Basically, for one reason or another, potential dropouts are maladjusted and disenchanted with their present school. If adult education programs are properly developed in association with the public schools, the dropout will merely become a transfer. The main change in his status will be different, but it will be continuing.

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Appendix A

Some arguments for and against the area Occupational Center as the place for Vocational Education:

ADVANTAGES

1. The school schedule can follow that needed for vocational school work, and need not conform to an academic schedule.
2. Administrative and supervisory staff can be required to have background and training which is geared to vocational school needs, through certification requirements.
3. The vocational program is the main function of the school, and gets primary attention.
4. Relations with industry with respect to keeping courses up to date, placement of graduates, etc., seem to be somewhat more easily attained.
5. The whole school staff thinks in terms of vocational students and programs, and does not have to spread its interests over a wide educational program.
6. The physical plant is frequently more functional from the standpoint of vocational work.
7. If the program is large enough to warrant specialization--such as graphic arts, metal trades, building trades, etc.--this can more readily be done in separate vocational schools.

(Keller, 1953.)

DISADVANTAGES

1. The guidance personnel in the feeder schools frequently give undue attention to students who plan to enter academic schools. The vocational school becomes the dumping ground for low-ability and trouble-making student.
2. Students tend to be segregated. Often the vocational school is for boys only or for girls only, and students lose out on school relationship with the other sex.
3. Competition for students between the vocational and academic schools may not be in the best interests of the youth.
4. Vocational schools have often been housed in cast-off buildings and thus give the program a reputation which is hard to overcome.
5. Often the facilities are inferior to those in the comprehensive school.
6. There is less flexibility in the use of staff as compared with the comprehensive high school.

Appendix B

Some arguments for and against the Comprehensive High School as the place for Vocational Education:

ADVANTAGES

1. The school does not have to build a separate reputation for itself. It already is an accepted American institution.
2. A comprehensive high school with separate but adjacent vocational buildings has many advantages similar to the separate vocational school.
3. The guidance service of the feeder schools tends to take the vocational work into account more readily than with separate vocational schools.
4. All students, academic and vocational, meet together in the same clubs, physical activities, etc., and thus the program tends to be more democratic.
5. More elective offerings in academic subjects, clubs, etc., are available.
6. The prestige of the staff of the vocational department may be higher in the eyes of the community.

DISADVANTAGES

1. Sometimes the academic school day is less than six hours in length, and compromises in schedule are needed. Schedule making is more complicated.
2. To be really comprehensive, the school should offer all the vocational activities of the city in one school. This may be impracticable.
3. Specialization in large occupational fields is hardly practicable.
4. Sometimes there is found the practice of shooing vocational students into classes designed for academic-minded students.
5. The administration is often more interested in the academic work than in the vocational work.
6. When the vocational work is housed in a general high school building, the physical plant may not be suitable.

For the large city, the weight of advantage seems on the side of the separate school, at least for many types of programs. However, in the final analysis, the effectiveness of a vocational program, whether it is given in separate schools or in the comprehensive high school, depends on whether the leadership of the institution believes in vocational education, knows how to operate a good program, and gives it support and intelligent direction.

(Keller, 1953)

Chapter 14

The Role of the Teacher, Principal, and
Administrator in Curriculum Planning

By Maria Giglio

The foundations of curriculum provide guidelines for defining curriculum improvement functions. In the theory of curriculum certain aspects have to be dealt with and among these are content, objectives, evaluation and learning experience.

The overall curriculum looks like it has been the subject of endless debates. Teachers, administrators, and principals have in some areas overlapped and yet in many instances have divided and need improvement.

As the leader within this mainstreaming school, the principal has the foremost responsibility of establishing the priority of parent involvement and the attitude that will form the basis of school-parent interactions.

Principals also need to advocate for parent involvement individualized according to the particular needs and concerns of the parents. This should all be incorporated into the curriculum. Educators have long recognized the importance of individualization for students, the same guidelines apply to parents. Some parents want to be heavily involved in educational programs and others never want to enter the school door or have conversation with any educators.

I agree that principals who acknowledge and value parental

differences will lay a solid foundation for meaningful involvement. A role for principals exists in supporting other faculty in recognizing this concept.

In a study by Leo Weitz it has been indicated that principals do not have accurate perceptions of the total role concept held for them by their staffs and by their superintendents, that closer agreement exists between the principal and his staff than between the principal and his superintendent regarding concepts of the principals ideal role. He also states that principals are seen by their staffs as overemphasizing public relations and strictly administrative functions at the expense of curriculum functions (Weitz 1961).

The role definition of principals needs stronger clarification in the years to come because it is unclear as to exactly what his role is.

The first-line gatekeeper of curriculum improvement is the school principal because of his proximity to teachers and pupils. He serves as interpreter of the culture, professional leader on the education frontier, supervisor of instruction, stimulator of local community enlightenment and manager of a crucial enterprise (Umstatted, 1959).

In a more specific sense the principal has a list of many roles and the ability and understanding is much more than they possess. Thus, heavy instructional responsibilities which community members place upon principals call for quality of preparation which colleges and universities have too seldom provided.

The educational leader, the principal is a highly visible man in charge. He is accountable to his community and higher ups. He gets his position through demonstrated expertise.

Recognizing the man in charge, nature of his position, the school principal must get all the information he can on the condition of his school and community. He must then define the problems, set his priorities, make staff assignments and develop his curriculum.

The educational leader must utilize his team of assistants by five specific suggestions (Kauss 1974).

- 1) Surround yourself with people who are smarter than you are. The more they know, the better your operation will function and the less likely it is that you will make mistakes.

- 2) Listen to them. Make it easy for them to talk to you. Don't tell them what the problem is. Ask them.

- 3) Find out what your subordinates can do best. Let them tell you what they want to accomplish, then help them to achieve their goals.

- 4) Load them with challenge and responsibility. Do it as soon as possible.

- 5) Give them credit for their accomplishments. Let them know that their work is appreciated.

Developing his staff resources doesn't negate the principals role as a leader. Instead this causes the entire team to work as a system with all efforts in the same direction. The strength of his staff will make him a more powerful person.

In his role of curriculum development the principal in keeping in mind the five suggestions, he will then be able to

make firmer decisions involving money, safety, and people's careers. In many instances he must respond to individual needs of his students and staff. Utilization awareness of his environment will make him a better person, communicator, and leader.

Teachers are employed to instruct in a manner that efficiently assists students to realize goals and objectives constituting a district of school curriculum.

According to Robin McKeown (1976) she states that fundamentally, but not exclusively, a teacher performs five tasks:

- 1) The teacher determines by task analysis what knowledge and skills are prerequisites to the realization of established curriculum goals and objectives.

- 2) The teacher identifies experiences enabling students to realize a wide range of cognitive, effective, and psychomotor objectives.

- 3) The teacher designs and produces curricular programs and curricular materials providing experiences which enable students to realize specifically established objectives.

- 4) The teacher implements school and classroom curricular programs by employing productive motivational and instructional strategies and by establishing appropriate learning environments.

- 5) The teacher measures student performance and assesses curricular program efficiency.

While it is within the power of the local school to determine the district curriculum or to delegate this power to various administrative levels, there are constitutional limitations that affect school administrators' control of teacher behavior.

What most distinguishes, or should distinguish the teacher

from the layman is the teacher's ability to create effective classroom experiences. In order to develop and implement programs teachers must be able to perform various professional duties associated with measurement, evaluation, task analysis, curriculum development, and the utilization of various instructional strategies.

Perhaps the major national barrier facing those wishing to improve the American schools is the attitude that teachers are autonomous and free from the curricular policies of district and school.

The most important breakthrough that needs to be made is by each individual teacher and he must make not one, but many breakthroughs, lifting himself forever from one level of knowledge, insight, and competence to another by unending study of himself, his students, his subjects, and the world about him (Doll 1970).

Once a teacher becomes assertive and improves her ability and quality of decision making it causes a stronger curriculum within her environment.

There are two principal lessons to be learned from history about the teachers role in curriculum development:

- 1) attempts to shunt the teacher from curriculum decisions are unrealistic and unproductive, therefore teachers must be directly involved, and

- 2) teachers must be provided with consultative help (including the help of qualified statisticians) when engaging in research and other curriculum development activities. Not all teachers should engage in research; but all need help

(Tanner 1975).

I would have to agree that the teachers need help with the curriculum development because this is not a program to be dealt with alone. By being exposed to a wide range of practices, this allows all teachers to understand what is happening.

There is little need to re-emphasize the fact that classroom teachers largely determine the curriculum. Regardless of grandiose curriculum plans, when the classroom door is closed the insight and skill of the teacher determines in large measure the quality of learners' experiences (Doll 1970).

Teachers perform three major tasks that make them effective improvers of the curriculum:

- 1) They work and plan with pupils
- 2) They engage in individual study
- 3) They share experiences concerning the curriculum with other teachers.

(children from books, and from each other, teachers grow insight and skill so that they provide better experience) for their pupils and the future.

Supervisors are involved regularly in curriculum improvement activities so diversified as to challenge their utmost adaptability and ingenuity. In general, supervisors are concerned with three giant tasks:

- 1) Helping to determine purpose of education and helping to see that these purposes are adhered to in daily practice.

- 2) Giving democratic instructional leadership
- 3) Keeping channels of communication in school organizations open: (Doll 351).

I feel that if a supervisor can be successful in the above three tasks he has more than fulfilled the needs of his role, simply because he is dealing with many different groups, parents, teachers, fellow supervisors and administrators.

M. Hayes Mizell, associate director of the Southeastern Public Education Program noted that administrators often make the mistake of suspending students with behavior problems rather than working within the academic setting at finding the cause of their disruptions (Benedetto, 1979).

Rather than blanket suspension, said Mizell, some schools have success in dealing with misbehavior by creating what he called in-school suspension programs. They consist of temporarily sending students who misbehave to separate classroom manned by a specially trained teacher.

I agree with Mizell, that the discipline program should be incorporated in the school curriculum by the administrator. If a teacher throws a student out of class, he has solved the teachers problem, but not the student's problem. The teacher is the adult in the situation.

Functions of supervisors and curriculum workers are obligated to search out new means that fit our times. The supervisory function is not only critical but also inherent in the decision making process area which most directly touches the lives of children and youth in the school (Atkins, 1973).

If accountability in education means making the present conception of schooling more serviceable, than supervisors and curriculum workers should be about the business of seeing that those who are being called to account have the right information, skills, and insight on curriculum renovation that are needed at the right time.

Muriel Crosby has pointed to some of the potential contributions of supervisors to curriculum planning. She asks the following evaluative questions about programs of supervision:

- 1) Has support between participants deepened?
- 2) Have teachers developed a greater freedom in expressing opinions and sharing ideas?
- 3) Does leadership move more freely and requeently from person to person?
- 4) Is there greater teacher initiative?
- 5) Are teachers better able to identify their own problems?
- 6) Do they see help more frequently?
- 7) Are teachers better able to identify the needs of boys and girls and meet them in more satisfying ways?

A supervisor can contribute to some of the above potentials he will be keeping close to the feelings of teachers and will be meeting specific need for improvement.

Whether the curriculum supervisor behaves as a coordinator a change agent, philosopher, curriculum theorist, resercher or facilitator of in-service education, his task will

will be that of a supervisory staff member in the school system. Realistically, his basic task will be to provide supportive services such as assistance in analyzing instructional problems, helping to remove barriers which might hinder orderly progress in terms of encouraging change or instilling confidence in the teaching staff. The teaching staff would have a series of needs which the curriculum supervisor could attack and by doing so would facilitate the professional functions of the teacher and subsequently improve teacher efficiency. Basically, the curriculum supervisor will be one with special competence who will be needed by a professional teaching staff constantly and consistently concerned with the improvement in instruction. With respect to this concept, it is probably best to try to picture the curriculum supervisor as a member of the teaching staff concerned with meeting the needs of those who are particularly concerned with the improvement.

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Chapter 15
SOCIOLOGICAL FACTORS
IN VOCATIONAL EDUCATION

By Robert Casper

Society places many pressures, past and present on students and teachers/administrators, on business and on every other factor which will influence a person's education and resulting career opportunities. A vast number of people in this country are classified as disadvantaged, a result of their social position due primarily to their economic, ethnic, social, or educational status. These sociological factors come in many forms, some of which are profound and obvious, while others are subtle and still others are practically invisible. The social factors influence job availability, educational opportunities, family lifestyles, and beliefs and aspirations for the future. The environment, educational opportunities, available career potential, recent trends in business and government support, and some pilot projects and their potential are all part of the sociological factors in vocational-technical education.

The basic and most universal characteristic of the people in this group is that they are poor, in many cases desperately poor. They live in the poorest housing, often unfit for habitation. They have inadequate diets, often lack proper sanitation and other health

necessities, and they are forced, by their poverty, to occupy the crowded, deteriorating urban slums or isolated rural slums (i.e. American Indian reservations).

Factories and business prefer to occupy areas of higher income and lower crime rates (Leighbody), thus there are few employment opportunities within the community. Many families go through generations of high unemployment or underemployment. Young people who can work generally move to communities where there are employment opportunities, thus leaving the old, the very young, and the chronically unemployed in the slums.

In addition to the environmental differences and opportunities facing the disadvantaged, there is a distinct difference in family relationships between the lower class and the upper/middle classes. Middle-class parents are less intrusive and much more verbal with their children than their lower-class counterparts (Kagan). Davenport (1973) points out that in the home, Black fathers are less inclined than white fathers to take an active part in the socialization of their children - and in the guidance and counseling of the adolescent. Middle-class parents also talk more often to their infant children than do lower-class parents.

A vast difference in viewing fact versus fantasy is brought out by Kagan (1978). Children from poor families have realistic fears that are an indication of how they

live, rather than just a reflection of the passing stages of childhood.

The outside environment (society) has a distinct effect on the learning opportunities and expectations of the disadvantaged child. The socioeconomic class of a family is highly correlated with the child's I.Q. after age three. Children from poor families generally have lower I.Q. scores than children from middle class families (Kagan). The best predictor of a child's I.Q. is the mother's level of education.

Munbauer (1970) tested two groups of fourth grade children, one from middle and upper-class families and one from a lower-class environment. He discovered a significant difference in the I.Q. level, with the minority group doing poorly. However, on learning ability, both groups performed equally well. He showed that both groups have the same ability to learn, but the lower-class group in reality has a lower I.Q. level. Therefore the difference must be outside the school.

From kindergarten on the child should learn about the world of work. Much of the curriculum should focus on ideas related to employment. Davenport (1973) believes that the route to success in the financial and social spheres lay through the acquisition of the manual skills which are in demand by the nation as a whole versus success through the development of the mental faculties

which would result in minorities being competitive at the managerial or executive level. However, continued unemployment or underemployment is due not for the lack of job training, but rather the absence of a sound and complete general education (Leighbody). Over ninety percent of the disadvantaged students who dropped out of high school had one or both parents drop out of school. In addition, almost all of the guidance that young people receive before the age of employability occurs in school (Bingham).

The need for incentives, courses of interest to the student, course material which the student can relate to, the opportunity to see potential job/career opportunities, are all necessary in order to keep the drop-out rate down. A recent survey in a New Jersey high school showed that approximately half of the students desired a college prep curriculum, while the other half preferred vocational training (Cummings). Almost all of the students wanting college prep received it, while only half of those desiring a vocational program received it. The remainder were placed in a general education program. Sixty-six percent of the school's drop-outs came from the general education curriculum. These drop-outs make up the majority of the hard-core unemployed.

Many high school graduates go on to college only

because they haven't the vaguest idea of what else to do (Davenport). The result is students and graduates who qualify neither for a job or college. A survey in the State of Ohio in 1970 showed that almost ninety percent of the youth searching for employment had absolutely no skills to offer an employer. The nation annually dumps into the labor market two million young people whose only qualifications are a willingness to work (Rhodes). Career oriented education would provide for training into both blue and white collar fields. Bingham (1973) contends that a major cause of this is a lack of guidance in school. Presently areas of student behavior other than vocational planning consume larger and larger shares of counselors time.

Our technological society requires training into most occupations. Industry is not the place to do basic skill training and teaching the technological knowledge required for entrance into these fields. Schools must provide this service.

In the face of competition for tax dollars and shrinking school budgets, curriculums offered are often limited (Rhodes). Vocational curriculums are the most expensive per student and therefore serve the least number of students. In heavily populated urban areas, with few employment opportunities, often offer the fewest vocational education opportunities.

Vocational education does offer a career potential to the disadvantaged. But minority groups tend to view vocational training as inferior to academic education and more suited for those from the minority middle-class; vocational education continues to be something for someone else's children (Davenport). Expectations for better vocational positions is higher for middle-class students (Kagan), resulting in less interest in pursuing vocational education among minority students.

A New Jersey survey in the mid-1970s indicated that seventy-five percent of these students classified as disadvantaged had no access to any kind of vocational training. Jensen (1977) further stated that there was a disparity in the treatment of disadvantaged students as opposed to the handicapped students. State plans showed a certain per-pupil weighting index in computing financial support for the handicapped, while there was no such method for the disadvantaged student. Without a per-pupil formula for the disadvantaged, it is unlikely that many school districts will make little more than a token effort to serve them through vocational programs. However, vocational education is only one education ingredient, it can not do it alone.

The greatest number of youths eligible for vocational training under the classification of being disadvantaged are in the large metropolitan centers (Jensen).

It is estimated that almost half of the youths in these areas could be classified as disadvantaged by simply applying one criterion - two or more years behind their grade level in reading or math skills. This fact demonstrates the need for improved overall education. Already being economically disadvantaged, the addition of being educationally disadvantaged greatly increases the burden on the socially disadvantaged.

The disadvantaged youths from across the country who come from declining communities face very similar social characteristics. Some of these traits, as pointed out by Brown (1974), are that there is a surplus of young non-white children and older adults. The older adults have a lower education level than their minority counterparts in growing communities. These communities are characterized by low-wage and low-skill industries, thus a lower level of family income. There is also a low level of female participation in the labor force. Minority youths not in declining communities have a vastly higher level of education than the minorities in declining communities. There is also a greater opportunity for vocational education in growing communities.

The fact that education and income are positively associated is widely known. Strong (1975) states that minorities, ethnic groups, and some women often receive vocational training but the results are often statistical, not productive. For a woman or a member of a minority with low education attainment, the prospect for

any occupational advancement is bleak. For a woman who is a member of a minority, the prospect for occupational advancement is futile. Black women, although their participation in the world of work is high, earn less than any other ethnic group, male or female. Men from disadvantaged groups have often been trapped in occupations which present physical danger. The lower ranks of the military, mine workers, dangerous assembly line positions, and positions with high amounts of environmental pollutants have a very high percentage of disadvantaged persons.

When educational opportunities are presented equally to both white and nonwhite students, white students have a much higher enrollment than their nonwhite counterparts (Kagan). Minority students have different expectations about their future jobs than white students. The lower-class students express less feelings of personal control over job choices and less pessimism about enjoying their work or succeeding at it. As a result of this social force that seems to make their career opportunities limited, minority students seem to be less interested in long-term occupational advancements that may require years of preparation and work than in opportunities that provide immediate financial success.

The education programs to train persons, notably women and minorities, often lead them into dead-end jobs.

Often these are jobs designed and implemented to meet employers needs for cheap, trained labor (Strong). An incentive to enroll in vocational education is an availability of jobs. To produce jobs in depressed areas, federal manpower programs are quite often the only source. Federally sponsored programs often have to offer both training and employment.

For the disadvantaged person with no skills, external support programming may be necessary to start him in a manpower program (Cummings). Here vocational education and federally sponsored programs go hand-in-hand. Similarly, a disadvantaged person may need updating of skills or other abilities through external training before he becomes fully productive and career oriented.

However, many training programs emphasize statistics which are often misleading and fail to meet their goals. Frequently, the graduates of these programs soon discover that they are not only unable to meet their family's economic needs, but unable to even support themselves (Strong). Many enrollees earn a very low wage, but it is high enough to make them no longer eligible for food stamps, medical care, dental care, use of day-care centers, and other benefits that they received while on public assistance. In overall income benefits, the disadvantaged often lose money by working.

Although every piece of federal legislation geared

toward minority employment since 1960 has contained provisions for training, social factors arise to weaken its effectiveness. There is evidence that racial and other forms of prejudice are still causing unemployment and especially underemployment among the disadvantaged groups. Hiring practices and union restrictions often nullify the work of the job trainers. Leighbody (1972) also claims that there is evidence that vocational training has prepared the disadvantaged for dead-end, low-skilled jobs - jobs which may be eliminated soon by technology.

Many minority persons who do have skills or professional training have suffered social, economic, and career denials which are a contributing factor to today's economic gap (Cummings). Because of these denials, such an individual is more often than not unable to obtain proper or quality education, facilities, and housing for his dependants, or remove them from the detriments of the ghetto environment. The children then become disadvantaged and lack the motivation for education and work; society's 'catch twenty-two' that keeps the disadvantaged - disadvantaged.

Another serious blight facing the nonwhites is that unemployment facing the disadvantaged is higher than for whites (Rhodes). When the economy improves, the rate of white unemployment drops, but the minority unemployment

stays the same or increases, this due to the method used to compute unemployment.

To rectify the imbalance in employment opportunities created by a variety of social pressures, vocational education must overcome administrative shortcomings and increase its use of community resources. Jensen (1977) stresses the need for monetary incentives to identify the disadvantaged and recruit them into vocational programs. Also, there is a need for sufficiently clear guidelines so as to generate consistent compliance with the basic intent of the Vocational Education Act throughout the country.

There are three main reasons why there are so few minority students in vocational education (Jensen). Vocational teachers are reluctant to accept them as they are often peer achievers with poor work habits; they frequently pose discipline and attendance problems. This often being a stigma attached to minorities in general by society. Guidance counselors in general lack understanding of the opportunities to which vocational programs can lead and consequently fail to acquaint the disadvantaged students with the potential benefits of these programs. Finally, many students are reluctant to enter vocational education programs because they see them as bearing the stigma of menial labor.

For vocational education to be successful, it must

also benefit from the resources of the community (Carey). Realistic programs through the use of community resources will help relate education more closely to the career needs of students. Many depressed urban areas have potential resources that must be tapped in order to improve vocational education opportunities.

A strong trend is clearly shown that students are interested, career-wise, in education which is related to the form of employment which is predominant to where they live (U.S. Congress).

The community must actively contribute to the education of young people in regard to the world of work if they are to develop the work skills and job attitudes that will give them a place in society (Carey). To do this, career education must reach elementary and middle school pupils who prior to this had not been eligible for major participation in vocational programs. To implement massive vocational education opportunities, the need for resources from the community will be greater than ever.

Grants to finance vocational training programs are authorized by the Vocational Amendments of 1968. A pilot project in Philadelphia used students to manufacture various electrical components. Related remedial courses in math and reading were established, and students who had previously done poorly in these subjects showed vast improvement; a result of their ability to

see the value in education as related to their work (Harrington, 1972). Other programs are offered so as to train the chronically unemployed and disadvantaged youths. To be successful, the programs must give hope for future employment and that requires the use of community resources.

The sociological effects on vocational education are both diverse and very much prevalent. It can be caused by the family environment, education opportunities, career opportunities, prejudices, and a number of other elements. For education to be effective, all of the potential career fields must be presented to the student, and there must be sufficient availability of education opportunities present. Vocational education must be presented in a way which encourages and promotes the basic educational skills; this to allow increased flexibility in job and advancement potential. Legislation and planning from the Federal Government to local school boards is needed to offer the strong programs required to offset the forces of society exerted on the student.

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Chapter 16

Goals of Vocational Education

By Harold A Mellen, Jr.

In order for any educational movement, concept or plan to be successful, it must have purpose, objectives and goals. Vocational education is a movement that does have basic goals and they are considered as objectives in curriculum. The basic objectives (goals) are: (1) to meet society's need for workers; (2) to increase the options available to each student; and (3) to serve as a motivating force to enhance all types of learning. The basic goals and objectives of vocational education and how they are implemented and interpreted by the practitioner have become the purpose of this chapter.

In the United States, vocational education has become to mean education for any occupation which normally requires less than a baccalaureate degree for the beginning worker. The distinction between vocational education for the professions is arbitrary and terms are needed to refer to the full range of education for work.

The term occupational education is used to cover all the educational programs which prepare people for work, regardless of the occupational level. The term career education is even broader and includes programs and activities which awareness and exploration of the world of work and of the self in relation to work, and preparation for work.

Vocational education goals have shifted toward an emphasis on human resource development and focusing away from the narrow concern for meeting the needs of local employers.

In its broadest sense vocational education is that part of education which makes an individual more employable in one group of occupations than in another.

Often the term vocational education is used, especially in federal legislation, to include only instruction designed to enable people to succeed in occupations requiring less than a baccalaureate degree. The preceeding statement leaves out vocational education's interwoven relationship to general education. Every general education course can have occupational value. Awareness of the career goals can often lead students into seeing the relevance of certain course content which otherwise might appear highly irrelevant (Evans & Herr, 1978).

A group of educators representing programs which are recognized as being innovative, participated in a conference planned to identify commonalities which appear to suggest trends or directions in vocational education. There was general agreement that: (1) vocational preparation should be a part of every student's education; (2) the dichotomy between general and vocational education is false and must be eliminated; (3) planning for vocational education must include all students and be a responsibility of the total school; (4) greater individualization of instruction and greater student responsibility for his/her own learning are essential to improving vocational education; (5) teacher education and retraining are vital in implementing and maintaining new programs in the curriculum; and (6) constant program evaluation and development are essential for educational curriculum to keep pace with individual and social needs.

To further add support and credence to the preceeding general agreement, the United States Department of Education has taken positive steps. There is the Vocational Education Act of 1963/Public Law 88-210, part of which its functions is to generate grants intended to assist states to maintain, extend, and improve existing programs for vocational education. Also helps to provide programs in part-time employment for youths who need the earning from such employment to continue their vocational training on a full-time basis.

In addition, Public Law 88-210, was followed or further proceeded by the Youth Employment and Demonstration Projects Act of 1977, The Education For All Handicapped Children Act of 1977, which followed gave further support to the aforementioned trends or directions in vocational education. The legislative changes were designed to improve the quality and quantity of vocational education. In this light persons of all ages in all communities of the states, those in high school, those who have completed or dropped out, and those preparing to enter the labor market, and those who wish to up grade their employment status, and those with special handicaps, will have ready access to vocational training or retraining. Training which is realistic in the light of actual or anticipated opportunities for gain full employment. (USSC, 1968).

To further add support and credence to the goals and objectives of vocational education the Vocational Act of 1963, Section 12, provides the authorization for the creation of an advisory committee or council. The council made up of education practitioners has the responsibility of reviewing and

evaluating current national vocational and technical education programs. It also is responsible for making a report of its findings and recommendations to the Secretary of Health, Education and Welfare.

The contents of the report is broken down into the following areas: (1) the social and economic environment of vocational education; (2) the Vocational Education Act of 1963; (3) the status of vocational education; (4) basic concepts of education for employment; and (5) Recommendations.

In this report is described the changing social and economic environment which has elevated formal preparation for employment to a critical level in public policy. The second area reviews the background and objectives of the 1963 Act and evaluates the accomplishments and shortcomings in pursuit of those objectives. The third area describes the current status of vocational education. The fourth area sets forth some of the basic concepts for career development education under current and emerging conditions. The fifth area describes a unified system of education for employment based on those concepts in addition to recommendations for improvement in the 1963 Act, and for administration of new and changing concepts of education for employment.

Of importance in this report is the recommendations of the Council, they were: (1) administrative complexities be reduced by combining all vocational education legislation into one Act; (2) a Department of Education and Manpower Development be established at the Cabinet level; (3) innovation be encouraged by contracts and grants between the Commissioner of Education,

State Boards, local educational agencies, public and non-profit institutions; (4) specific funds and permanent authority be provided to develop new and expanded vocational education programs for persons with academic, social, economic, or other handicaps; (5) the Act of 1963 to provide permanent Authority for work-study programs at the secondary and post-secondary levels of vocational education; (6) residential vocational schools be constructed and operated under grants from the Commissioner of Education to State Boards of Vocational Education; (7) at least 25-percent of vocational education funds be earmarked for post-secondary school and adult programs (USOE, 1968).

Accountability at the state level is also a requirement as set forth in the Vocational Education Act of 1963, as revised by the United States Congress in 1976. In the format of a state plan for occupational education, the new legislation required that this plan be developed with active participation of a state plan committee composed of representatives of various agencies and groups specified by the Act. The state education department is also required to meet four times during the development of the plan, in addition to conducting eight public hearings prior to the plan's development. The Act requires submission of a 5-year plan and an annual plan and accountability report, rather than the combined annual and long-range plan previously required.

The state plan contains five major sections: (1) demographic, educational, and economic profiles of the state; (2) projections of enrollment goals and resource allocations; (3)

descriptions of the uses of Federal funds to achieve the purposes of the Act; (4) allocation of funds to eligible recipients; and (5) administrative provisions. There is also an expanded and updated section on the status of women in the labor force included as background to the plan's emphasis on elimination of sex discrimination in occupational education.

The state plan of occupational education is our state's interpretation of how it is going to set out to achieve the goals and objectives of the Vocational Education Act of 1963, as revised by Congress in 1976. In order to continue receiving Federal funding for agencies and projects that depend on this source of revenue, an annual plan must be submitted each year to prove achievement and additional needs (SED, 1977).

States are working together to achieve the goals and objectives of vocational education. The Education Commission of the States is a non-profit organization formed by interstate compact in 1966. Forty-five states, including Puerto Rico and the Virgin Islands are now members. The purpose of this commission is to further a working relationship among governors, state legislators, and educators for the improvement of education.

At one of the Commission's most recent annual meetings, then New York Commissioner of Education and President of the University of the State of New York, Ewald B. Nyquist presented the keynote address, whose topic was, " The Great American Dream: Education for Work". In the content of Commissioner Nyquist's address was generated questions concerned with what steps education is going to take in order to continue to meet

the needs of the public sector.

During this same annual meeting held in San Francisco in 1976, numerous discussion topics were presented in such areas as: " Getting Back to the Basics; Title 9 Regulations; School Finance; Child Abuse and Neglect; Minimal Competency; Early Childhood Development and the States; Accreditation and Institutional Eligibility; and the States and Higher Education".

Recommendations generated from this meeting were as follows: (1) schools need to take the leadership in making available other community resources; (2) states need to establish a process which involves communities in defining and implementing career education; (3) each school district must develop goals for what parents, schools and other participants in the education process are expected to do; (4) the real world has to be brought into the classroom to help indicate what is needed from education; and (5) state-level exchange programs be created and offered for school personnel, government, business and industry to aid to clarify roles (Pierce, 1976).

The instructor plays a very important part in aiding to achieve the basic goals of vocational education, without whose involvement, student learning delivery process would be greatly impaired.

Once an instructor decides he/she will teach their students something, several kinds of activity are necessary on his part if they are to succeed. He/she must first decide upon the goals they intend to reach at the end of the course or program. He/she must then select procedures, content, and methods that are relevant to the objective; cause the student to react with

the proper subject matter and finally, measure or evaluate the student's performance according to the objectives or goals originally selected.

An objective is an intent communicated by a statement describing a proposed change in a learner. It is a statement of what the learner is likely to be when he/she successfully completed a learning experience. It is also a description of a pattern of behavior we want the student to demonstrate. Objectives or goals must be stated in the terms that the student can clearly understand and follow, or proper evaluation of a course will become next to impossible to evaluate.

A meaningfully stated objective is one that succeeds in communicating to the reader the writer's instructional intent. The best statement is one that excludes the greatest number of possible alternatives to the instructor's goal. Until an instructor can describe what the learner is doing, when he/she demonstrates that he/she understands and appreciates, the instructor has described very little at all (Mager, 1962).

To help instructors in vocational education to do their job more effectively, they participate in on going in-service training experiences. One such tool is the learning module. Program planning, development, and evaluation are processes covered, to assist secondary and post secondary vocational instructors in gaining knowledge and skill to develop and write program goals and objectives for vocational education programs.

These modules are designed around performance-based instructor educational concept. Each module provides learning

experiences that mix theory and practical application, each with criterion-referenced assessment of the teacher's performance of specified competencies. Module instruction materials lend flexibility to meet a wide variety of individual needs and interests. Module instruction materials lend their flexibility for use especially in colleges, universities, government departments of education, post secondary and local education agencies, and others responsible for professional development of vocational education educators.

Modules are available in series designed to take the learner from the curriculum development process, through program goals and objectives, learning experiences, types of goals and objectives, to the terminal objective (CVE, 1978).

Vocational educator in-service training can also take form as a workshop atmosphere, presented for the purpose of keeping up to date on knowledge, techniques for goal support. One such example was a series of seven sessions presented by the National Inservice Training Multiple Institutes of Vocational and Related Personnel in Rural Areas, funded by the U.S. Office of Education through North Carolina State University.

The institute/workshop series was divided into two phases: Phase-1, the planning period; Phase-2, the two-week institute workshop. Participants were divided into five working groups, each with a chairperson and a recorder. Frequent presentations by consultants throughout the programming enabled the work groups to take systematic approaches to annual and long-range planning, at the local and state levels, and budgeting and evaluation for vocational programs in rural areas for youth and

adults.

Case studies were purposely structured to simulate actual conditions so as to provide practicality to analysis and solutions. The working groups used the team approach to develop solutions and analysis and alternatives to problems. Each participant in addition developed a proposed solution to a problem or concern in his own field of responsibility, including the identification of the instruments, guidelines, models, objectives, and goals necessary for solving it.

In preparation for this institute/workshop each participant was asked to identify a vocational education problem in the rural areas of his state or a program designed to provide vocational education to rural areas. Each participant was sent an extensive bibliography, prepared by the institute staff, of the resource material available at the University of Florida where this institute/workshop series was to be held, relating to rural populations and problems. Participants were asked to review and identify, prior to the course, those resources that might refer to their area of concern. At the completion of the series each participant was asked to take home and complete a very extensive report of their reactions to the programming, accomplishments, remaining unanswered questions, et.. (Kurth & Perkins, 1970).

There has been much information covered in this chapter concerning the basic goals of vocational education, its language, legislation, instructor/teacher inservice training, etc, but what about after the students have gone into the world of work.

What about the need for bringing vocational education programs to their logical conclusion, putting entry level skills to use. A point is made that most students in such programs have their objective obtainment of a job or a better job. It is suggested that each secondary school serve as an employment agency and that a job placement coordinator serve as an employment coordinator, consultant, and an educator. The criteria for job placement should include student resumes, ability to fill out job applications, and successful interviewing.

It is further recommended that follow-up of vocational education students be an integral part of every program in order to provide evaluation of program effectiveness by accumulating: (1) job placement and competency information; (2) descriptive and job training information; and (3) provide other sorts of job-related information. In addition it would be necessary for vocational education instructors/teachers be educated to assist students in job application procedures and be able to assess student competency in relation to existing jobs.

Also covered in this source is job placement; needs and objectives, the placement program, duties of the placement coordinator(while student is in training or academic workshop setting), and student follow-up: needs and objectives, types of programs, roles and responsibilities of educational personnel, frequency and timing of follow-up programs, collection of information, and treatment and use of follow-up data.

(Miller & Budke, 1970).

In the final segment of this chapter on the goals of vocational education is a discussion concerning the institution's

administrational responsibility to maintain methods and approaches to keep informed their publics, both internal and external. In reference to California's famous Proposition # 13 of last year is pointed out the power of the public sector.

Educational management at all levels is caught up in the crunch of new demands for information: technical, economic, and social. The media explosion, triggered by increased needs of industry, business and community brought about by the electronic age, human engineering and space-age technology. The local administrator can no-longer fall back on the rusty dusty days of old in communicating his institutions needs, plans, goals or objectives. His information must be timely, factual, and in plain language that the general public understands.

The educational administrator whether he/she be in general or vocational education must seek out and identify the best and most effective avenues of public communication available to his school community. He/she must develop a rapport that generates and maintains positive support for the mission of the school's programming- goals and objectives.

In education today, there are many publics to inform, influence, and seek advice from both internal and external. In addition there is waiting a vast resource of vocational expertise (ie: labor force, industry, and business) and the media (ie: daily newspaper, radio & television stations, as well as local cable-tv systems).

Developing and maintaining a successful public information program is vital to the future of education dollars, and participation of generations of vocational educational program-

ming (ACSA, 1973).

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